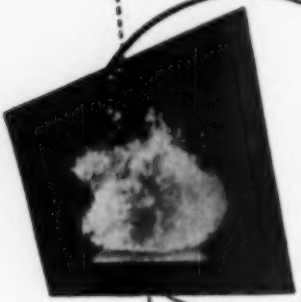
Medical TIMES



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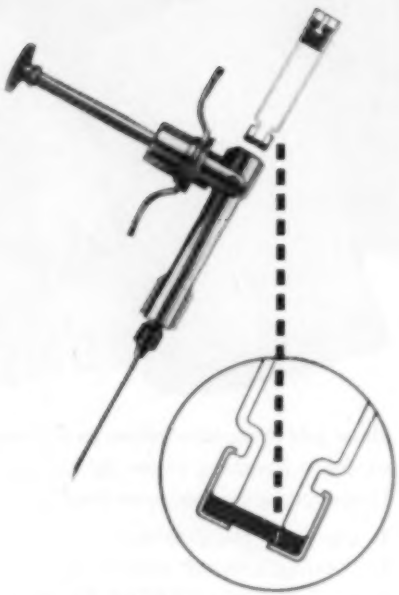

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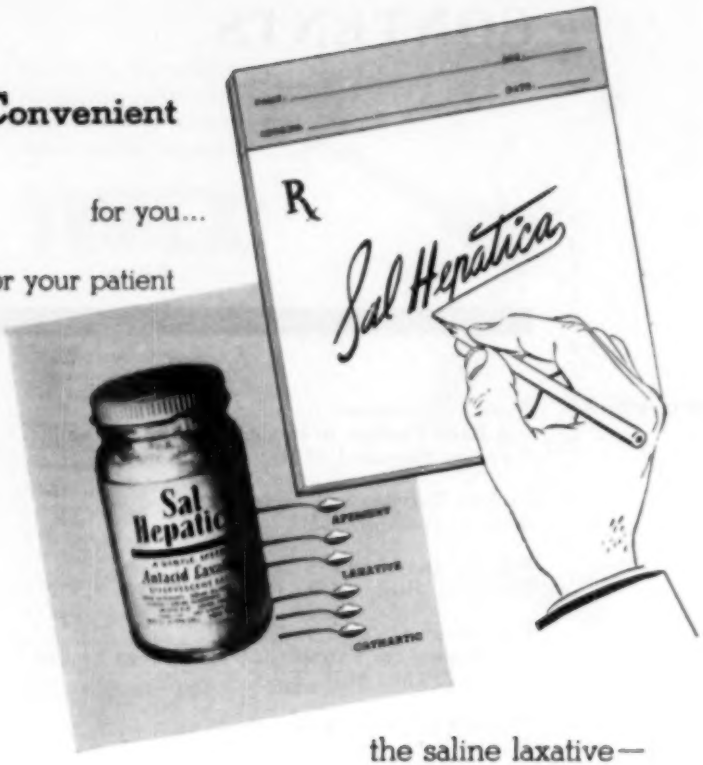

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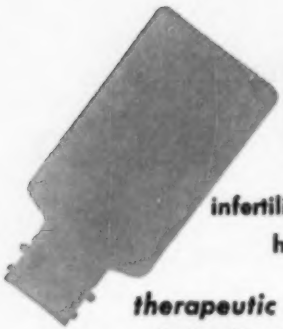

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As thyroid accelerates cellular metabolism proportionate increases occur in tissue demands for co-enzymes of carbohydrate metabolism,[1] for vitamin precursors of respiratory enzymes — thiamine and riboflavin — and for labile methyl groups of which choline is the most effective provider.[2]

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bibliography

(1) Cowgill, G. R.: The Physiology of Vitamin B, The Vitamins, A Symposium, American Medical Association, 1939, pp. 159-179. (2) Paul, W. D., Daum, K., and Kemp, C. R.: J. Iowa State Med. Soc. (April) 1947. (3) Williams, R. D., and Kendall, E. C.: J. A. M. A. *121*:1412, 1943. (4) Gubner, R., and Ungerleider, H. E.: Am. J. Med. *6*:60 (Jan.) 1949. (5) Stamler, J., Beiene, C., Levinson, E., and Dudley, M.: Endocrinology *46*:382 (April) 1950.

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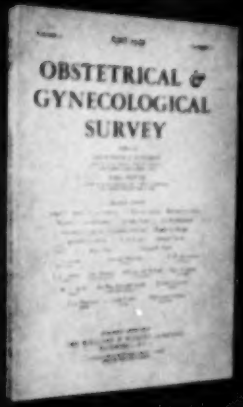

"... these statistics are the best that have been reported. In fact, they couldn't be any better."

Editor: Obstetrical & Gynecological Survey
Vol. 4, No. 2: April, 1949: page 190

...statistics referred to are those reported by Dr. ... W. Smith in her article, "Diethylstilbestrol in the Prevention and Treatment of Complications of Pregnancy", in the November, 1948, issue of *The American Journal of Obstetrics and Gynecology*. This study of 632 pregnancies showed that, "under stilbestrol treatment the habitual aborter enjoys the same outlook for a living baby as does the average gravida. This is what I mean by saying that these statistics are the best that have been reported".[1]

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REFERENCES
1. Editor: Obs. and Gyn. Survey, 56, 821-834, Nov. 1949. 2. Karnaky, K. J. Estrogenic Tolerance in Pregnant Women. Amer. Jr. Obs. and Gyn. 53, 312-316, 1947. 3. Silbernagel, W. M. and Burt, O. P. Ohio State Med. Jr. 39, 430 May 1943. 4. Rosenblum and Melinkoff. Preservation of the Threatened Pregnancy with Particular Reference to the Use of Diethylstilbestrol. West. Jr. Surg. Obs. and Gyn. 55, 601-603. Nov. 1947. 5. Hamblen, E. C. Endocrinology of Woman. Springfield, Ill. Charles E. Thomas, 1948, p. 476.

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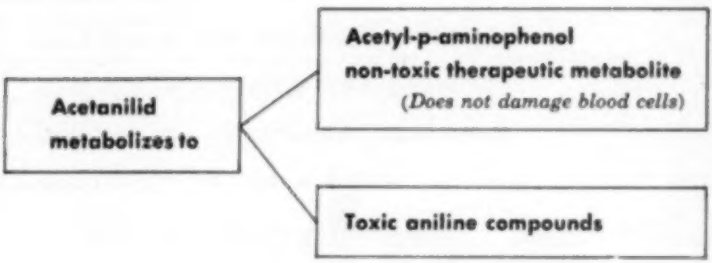

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1. *Raeb, B. B., Rahe, J. R., and Colwell, A. R.: Proc. House Staff Dept. Med., Wesley Memorial Hospital, Chicago, Ill. Feb. 6, 1948.*

2. *Rahe, J. H., and Colwell, A. R., Proc. Amer. Diabetes Assn. 8:37, 1948.*

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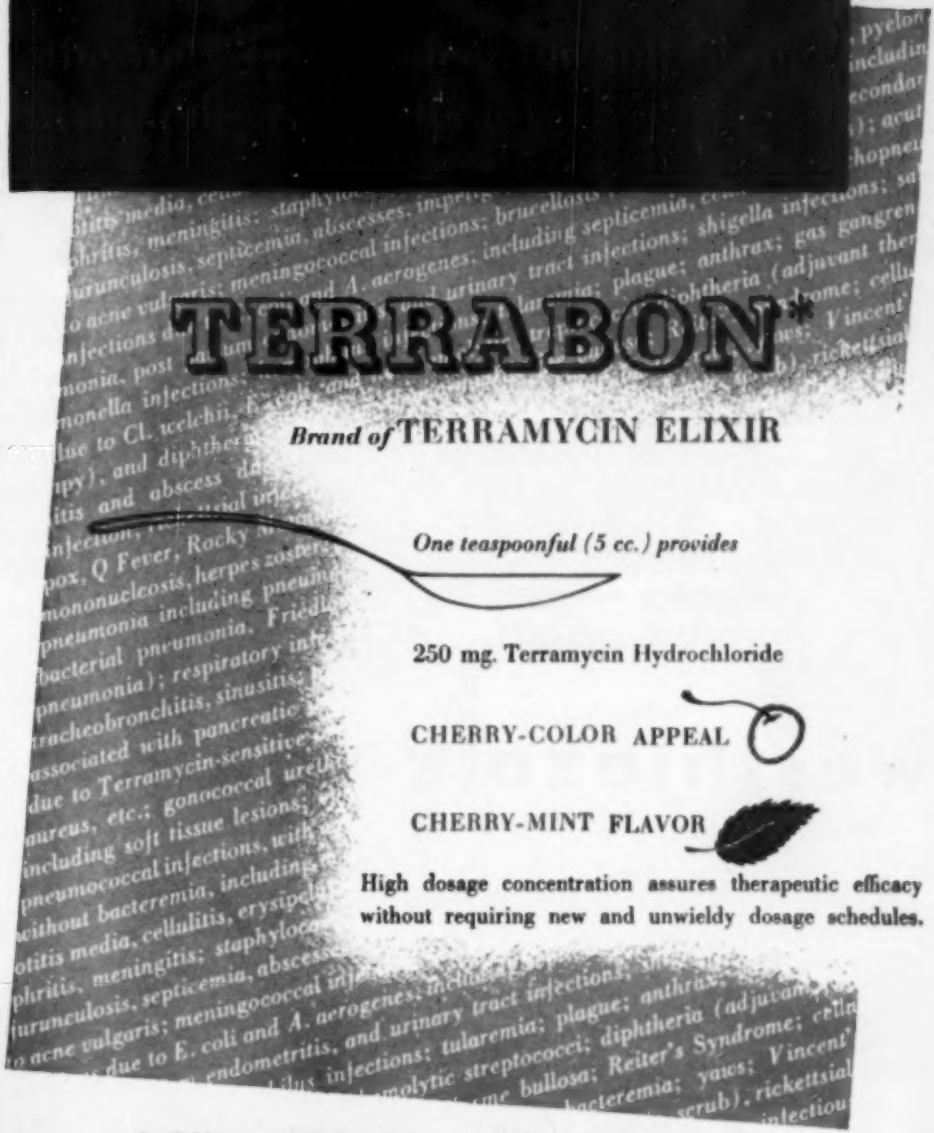

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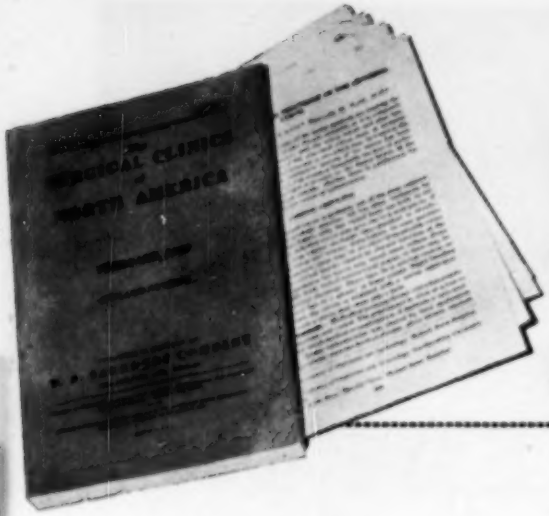

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by Stein, I. F. and
Kaye, B. M.: Su. Clin.
North Am. 30:259, 1950.

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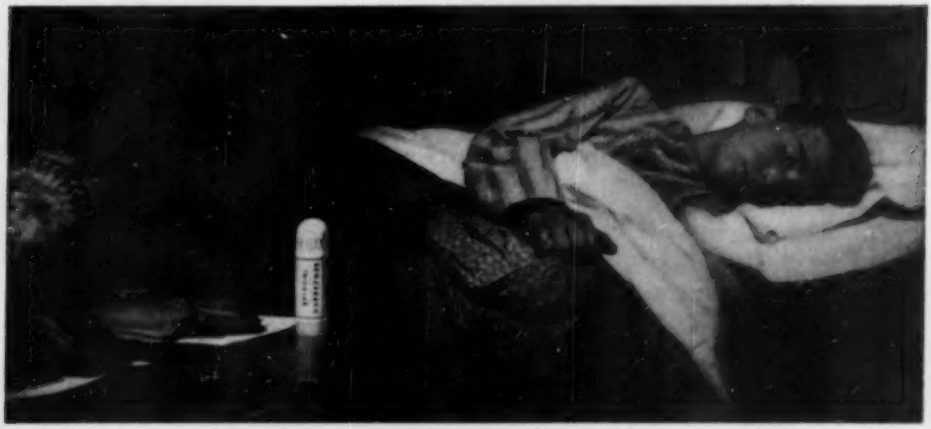

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1. Offenkrantz, W. F., *Rev. Gastroenterol*, 17:359-367 (May), 1950.

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(1) Allard, M. S.: New York St. J. Med. 50: 171-175, 1950; (2) Freis, E. D., and Stanton, J. G.: Am. Heart J. 36: 233-238, 1948; (3) Freis, E. D.: Med. Clin. N. Am. 32: 1247-1256, 1948; (4) Freis, E. D., et al.: J. Clin. Investig. 28: 351-360, 1949; (5) Wilkins, R. W., et al.: J.A.M.A. 140: 961-965, 1949.

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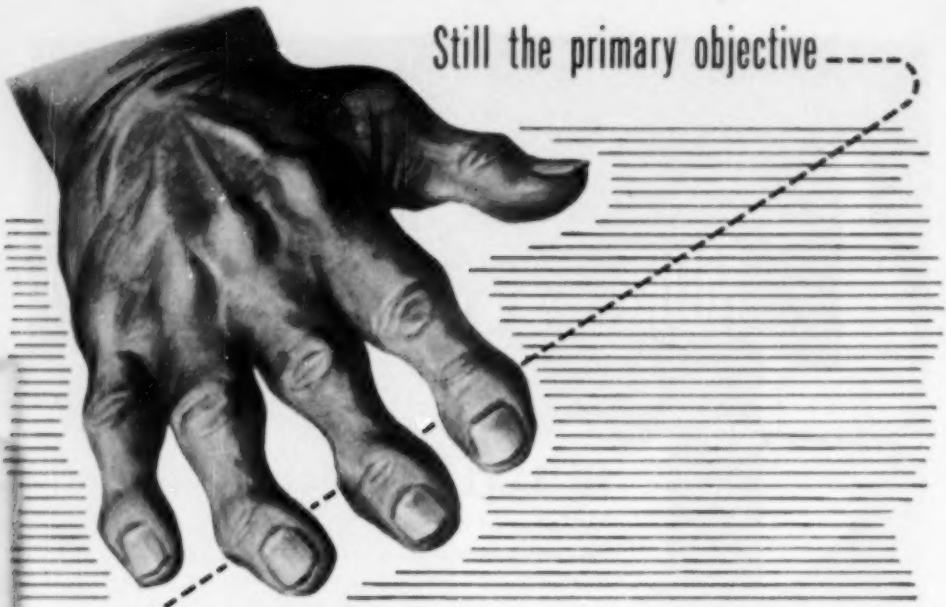

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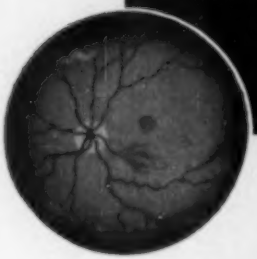
A BARD-PARKER PRODUCT

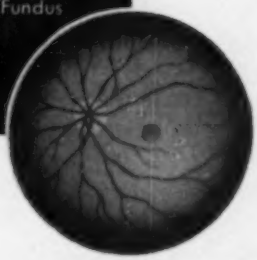
RUTAMINAL*

the protection of **rutin**[1] the action of **aminophylline** the sedation of **phenobarbital** —for use in selected cardiovascular and diabetic conditions in which excessive capillary fragility presents a complicating hazard —bottles of 100 tablets

Ocular Fundus in Degenerative Vascular Disease—Hypertension, Diabetes, Arteriosclerosis —note tortuous blood vessels, areas of exudation, hemorrhagic areas.



Normal Ocular Fundus



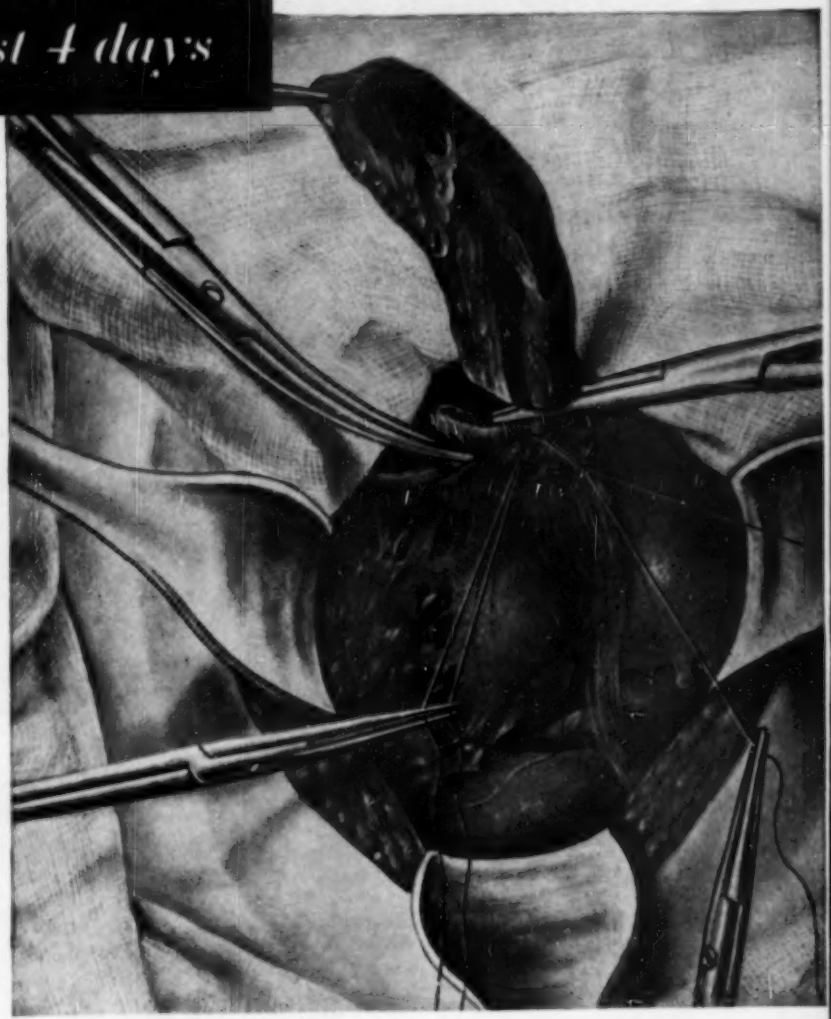
[1] In keeping with newer clinical findings, the rutin content of RUTAMINAL has been increased to 60 mg. per tablet (three times the former rutin content) at no increase in cost to the patient.

*RUTAMINAL is the trademark of Schenley Laboratories, Inc. and designates exclusively its brand of tablets containing rutin, aminophylline, and phenobarbital.

schenley laboratories, inc., 350 fifth ave., new york 1, n. y.

During the critical first 4 days

. . . the stump



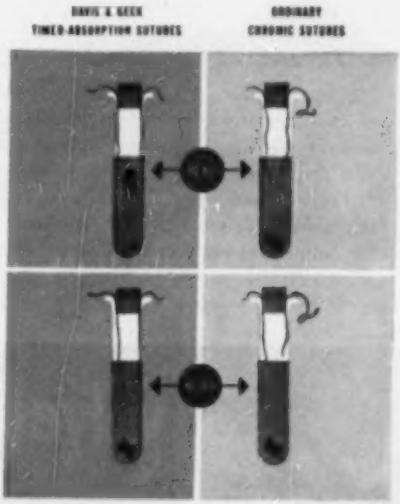
"Timed-Absorption" catgut (surgical gut) will not digest prematurely after an appendectomy or other major surgery. It provides wound support for the complete duration of anticipated healing time. Digested at a measurable and predictable rate, "timed-absorption" catgut sutures assure strength when needed most.

DAVIS & GECK, INC. *57 Willoughby Street, Brooklyn 1, N. Y.*

must hold!

"TIMED-ABSORPTION" CATGUT

Processed by an exclusive improved method, only "timed-absorption" catgut (surgical gut) sutures embody accurately *graded degrees of tanning* from the outer surface inward to achieve a more logical absorption curve. Maximum resistance to digestion is assured *during early stages of wound healing* when the wound is weakest. As healing advances and the need for artificial support lessens, the absorption rate increases and the strand dissolves completely with minimal tissue reaction. No remnants of gut remain.



Comparison of D & G "timed-absorption" medium chromic catgut suture, size 0, with ordinary medium chromic size 0 catgut sutures. Both types of catgut are suspended in a trypsin solution and weighted. Note that at the end of 30 hours "timed-absorption" catgut remains intact; the weight is still held suspended up to 90 hours. Contrast with ordinary chromic catgut suture which has begun to digest and breaks under the slight tension created by the weight at 30 hours. In human tissue all chromic sutures are digested more slowly, but the ratio between the two types remains the same.

Finished with a satin-matte surface, D & G "timed-absorption" catgut sutures tie readily and do not slip at the knot in contrast with slick, highly "polished" strands. Pliability is exceptional and tensile strength, diameter for diameter, is unexcelled by any other brand.

There is a D & G suture for every surgical purpose.
Available through responsible dealers everywhere.

DAVIS & GECK

"timed-absorption"

CATGUT

LETTERS TO THE EDITOR

This department is offered as an Open Forum for the discussion of topical medical issues. All letters must be signed. However, to protect the identity of writers, who are invited to comment on controversial subjects, names will be omitted when requested.

"CARDIAC ARRHYTHMIAS"

"Your August issue contains a Review of the Arrhythmias that I consider extremely useful for general practitioners who do not have access to extensive cardiological literature. I am particularly impressed with the scholarly references to the newer diagnostic points and the newer therapeutic methods. An article of this type reduces the inevitable time lag between the development of something new and its general usefulness at the bedside.

"I wonder if MEDICAL TIMES would be willing to let me have a sufficient number of reprints of this article to distribute to the *Associate* Membership of my Society since this list represents an important group of general practitioners who are particularly interested in cardiology."

P. R., M.D., F.A.C.P.
Secretary
New York Cardiological Society

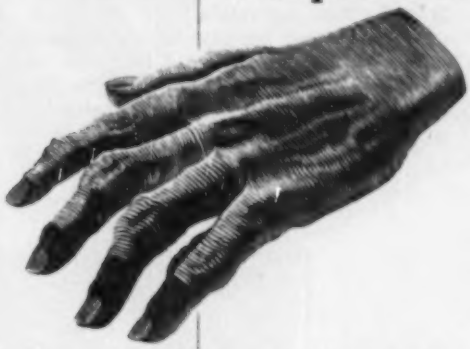
"This will acknowledge receipt with thanks of the reprint 'Cardiac Arrhythmias'.

"I note with interest that you plan to include in MEDICAL TIMES each month one or more articles summarizing and condensing the essential information on the

—Continued on page 50a

in rheumatoid arthritis

effective
safe
inexpensive



The adrenal cortex plays an important role in rheumatoid arthritis. Recent studies have shown a close relationship between sulfur metabolism and adrenal cortical activity. This offers a scientific explanation for the consistently good clinical results which have followed the administration of **Sulphocol Sol.**

Sulphocol® Sol

MULFORD COLLOID LABORATORIES

Solution of Colloidal Sulfur Compound
for intramuscular administration

Sulphocol Sol: *25 cc. multiple-dose vials; 12 and 100—2 cc. vials.*

Dose: *0.25 to 0.5 cc. intramuscularly at 3 to 7 day intervals, gradually increased to 3 cc.*

WRITE FOR LITERATURE

The National Drug Company, **Philadelphia 44, Pa.**

More Than Half a Century of Service to the Medical Profession

A PRODUCT OF THE MULFORD COLLOID LABORATORIES

yes, doctor . . .

Actually

So!

The Food and Drug Administration has advised that it is their opinion that the name Vitamin B-12 is NOT TO BE USED in connection with the so-called Concentrates containing small proportions of Vitamin B-12, Vitamin B-12a and other materials.

It is their present opinion that the name Vitamin B-12 refers to *Vitamin B-12, Crystalline, U.S.P.* and that the so-called concentrates should be designated by names which will not confuse them with the pure, crystalline Vitamin B-12 which has official status.

SPECIFY . . . . . RAMETIN

(a brand of crystalline Vitamin B-12)

RAMETIN TABLETS— the **first oral** Vitamin B-12. Palatable, candy-like in taste, soluble, scored tablets containing Crystalline Vitamin B-12, U.S.P. XIV. Available in three potencies:

5 microgram tablets, bottles of 25 and 100.
10 microgram tablets, bottles of 100.
30 microgram tablets, bottles of 100.

For parenteral administration . . .

SPECIFY . . . . . RAMETIN Injection

Literature and samples gladly supplied on request

BIO-RAMO *Drug Co., Inc.*

BALTIMORE 1, MD.

Nupercainal Ointment

for prompt and prolonged relief of local pain and itching

NUPERCAINAL OINTMENT is indicated in Hemorrhoids, Anal Fissures, Pruritus Ani, Pruritus Vulvae, Fissured Nipples, Burns, Intertrigo, Decubitus, and Nasal Furuncles.

NUPERCAINAL OINTMENT contains 1% Nupercaine (dibucaine) in a base of lanolin and petrolatum available in 1 oz. tubes with applicator and 1 lb. jars.

Ciba PHARMACEUTICAL PRODUCTS, INC., SUMMIT, NEW JERSEY

NUPERCAINAL® NUPERCAINE® (brand of dibucaine) 2/150454

Chemically Standardized Veratrum Viride Is Effective in Hypertension

Much has been written pro and con about the value of veratrum viride in hypertension. For many years the drug has been in disrepute because of the fact that the preparations available on the market have been prepared by "hit or miss" methods.

Chemical standardization of veratrum viride, however, has provided in this drug a highly effective agent for the treatment of hypertensive patients.

Sollmann[1] states that veratrum is probably the most active and reliable cardiac depressant and that its use serves to slow and soften the pulse and lower the blood pressure.

Willson & Smith[2] state that veratrum viride possesses a vasodilating effect and because of this, it was demonstrated by Hite,[3] and Freis and Stanton,[4] that the drug lowered pressure in hypertension and gave symptomatic relief. Recent research tends to show that the decrease in blood pressure results more from peripheral vasodilation than from depression of cardiac output.

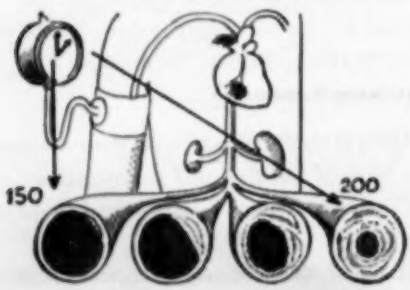
Uniformity of Action

When the veratrum alkaloids are chemically standardized, a uniform result can be expected. Their action usually causes a reflex fall in blood pressure and heart rate which originates in the afferent vagus nerve endings in the myocardium of the left ventricle and in the lungs. Although these factors ordinarily result with each heart beat, the veratrum alkaloids cause them to act continuously over prolonged periods of time. Reports have shown that 80 to 90 per cent of hypertensive patients respond to therapy when chemically standardized veratrum viride is used.

Cardio-Vascular Symptoms Cleared

In addition to the lowered pressure, objective signs of improvement may be observed, such as the clearing of retinal hemorrhages, diminution in cardiac size and reversal of left ventricular strain patterns in electrocardiograms.

Accompanying symptoms of the cardiac-hypertension syndrome, such as exertional dyspnea, tachycardia, nervous irritability, headache, are relieved. Yet, while the results of veratrum viride medication are prolonged, the drug may not afford quick relief.



Role of the Nitrites

For prompt and effective fall in blood pressure, nitroglycerin, which acts in one to two minutes, is the drug of choice. It acts rapidly and, because of its powerful vasodilatory action, gives the patient almost immediate relief. The action of nitroglycerin, however, is fleeting and to sustain lowered pressure between the action of nitroglycerin and veratrum viride, an intermediate is necessary.

To this end, sodium nitrite is used. This drug is also a vasodilator and affords sustaining relief until the long range action of chemically standardized veratrum viride becomes effective.

Importance of Sedation

Nearly all cases of hypertension require sedation for allaying periods of anxiety and affording the patient a good night's rest. Mild sedation is often useful, especially in cases associated with chronic coronary insufficiency.[5] It is well known that excitement may induce anginal attacks and in such cases, phenobarbital, because of its prolonged action, should be used.

All of these drugs, chemically standardized veratrum viride, nitroglycerin, sodium nitrite, and phenobarbital are to be found in Capsules RAY-TROTE IMPROVED, prepared by the Raymer Pharmacal Company of Philadelphia, Pa. Each capsule contains

Phenobarbital	15 mg.
Sodium Nitrite	30 mg.
Nitroglycerin	0.25 mg.

With the equivalent of Veratrum Viride Tincture 4 minims (containing 0.1% alkaloids)

RAY-TROTE IMPROVED is effective in dosages of one capsule every three hours. It is contraindicated when renal insufficiency is present, or if pulse becomes abnormally slow following treatment.

For the 30% of hypertensive patients with capillary fault, the above formula, with 20 mg. of Rutin added, is available in RAY-TROTE with Rutin.

Bibliography

1. Sollmann: A Manual of Pharmacology, W. B. Saunders Co. (1942).
2. Willson & Smith: J. Pharmacol., 79:208 (1943).
3. Hite: Ill. M. J., 90:336 (1946).
4. Freis & Stanton: Am. Heart J., 36:723 (1948).
5. Falk: South. M. J., 40:501 (1947).

Send for a liberal clinical supply of RAY-TROTE IMPROVED Capsules and descriptive literature today to Raymer Pharmacal Company, N.E. Cor. Jasper and Willard Streets, Philadelphia 34, Pa.

medical management that actually promotes faster, better HEALING in PEPTIC ULCER

Not just another antacid or protectant...

but a new and positive approach to peptic-ulcer therapy. Each capsule provides, for the first time, the complementary actions of:

ALLANTOIN
60 mg.

Stimulates granulation and accelerates healing

ASCORBIC ACID
50 mg.

Strengthens scar tissue and reduces capillary fragility

ALUMINUM HYDROXIDE GEL (Dried) U.S.P.
100 mg.

Enhances the buffering and protective action of gastric juices

ALLUCEE
PATENT PENDING
ALLANTOIN, ASCORBIC ACID, AND ALUMINUM HYDROXIDE GEL
Kremers-Urban

SUPPLIES: bottles containing 100 and 1,000 capsules

Literature and samples on request.

K-U

Kremers-Urban Company
Pharmaceutical Chemists Since 1894
MILWAUKEE 1, WISCONSIN

poise . . .

. . . in women, is usually a synthesis of both physiological and psychological equilibrium.

The ability of TYREE's Antiseptic Powder to restore physiological equilibrium or to overcome many common pathological conditions stresses the value of professionally recommending this ethically promoted douche powder.

The detergent action of TYREE's Antiseptic Powder assures thorough cleansing in routine hygiene and its cooling essential oils afford a soothing sense of relief to delicate membranes. In pathological conditions, this powerful but gentle antiseptic easily destroys most ordinary intruders. In either situation, TYREE's low pH helps restore and maintain the normal protective acidity of the healthy vagina.

For your next patient who needs effective non-irritating therapy, prescribe TYREE's Antiseptic Powder. Write today for a *free* professional sample.

FORMULA:
MENTHOL
THYMOL
EUCALYPTOL
PHENOL
BORIC ACID
SALICYLIC ACID
ZINC SULFATE (Dry)

TYREE'S ANTISEPTIC POWDER

In bottles of 2 ozs., 4 ozs., 8 ozs.

J. S. TYREE, CHEMIST, INC.
15th and H Streets, N.E., Washington 2, D. C.
Makers of CYSTODYNE, a Urinary Antiseptic

MODERN MEDICINALS

Physicians will find that these brief resumes of essential information relative to the newer products are so prepared that they may be removed and pasted on standard 3 x 5" file cards, and filed for ready reference.

Quadrinal

11-50

MANUFACTURER: Bilhuber-Knoll Corporation, Orange, New Jersey.

INDICATIONS: In forestalling the onset of asthma and for relief of moderately severe attacks.

ACTIVE CONSTITUENTS: Each tablet contains Ephedrine hydrochloride, 3/8 gr. (24 mg.); phenobarbital, 1/8 gr. (24 mg.); Phyllicin (theophylline-calcium salicylate), 2 gr. (120 mg.); and Potassium Iodide, 5 gr. (0.3 Gm.).

DOSAGE: 1/2 to 1 tablet every three or four hours, to a total of 3 or 4 tablets per day. For children, the usual dose is 1/2 tablet three times a day.

HOW SUPPLIED: In bottles of 100, 500, and 1000 tablets.

Penicillin S-R with Dihydrostreptomycin

11-50

MANUFACTURER: Parke, Davis and Company, Detroit, Mich.

INDICATIONS: In the treatment of infections due to gram-positive and gram-negative organisms; and particularly useful where mixed infections are involved, such as subacute bacterial endocarditis, urinary tract infections; also in the preparation and protection of surgical sites.

ACTIVE CONSTITUENTS: A combination of soluble and repository types of penicillin, together with dihydrostreptomycin, a derivative of streptomycin possessing substantially the same antibacterial properties and somewhat lower toxicity than the parent drug. The contents of each rubber-diaphragm-capped drain-free vial, when diluted with 3.3 cc. of aqueous diluent, provides a single dose containing: 300,000 units crystalline procaine penicillin-G; 100,000 units crystalline sodium penicillin-G; and 1.0 Gm. dihydrostreptomycin (as the sulfate).

DOSAGE: As indicated.

HOW SUPPLIED: In single-dose sterile rubber-diaphragm-capped drain-free viels in individual cartons.

Sedamyl

11-50

MANUFACTURER: Schenley Laboratories, Inc., 350 5th Avenue, New York, N. Y.

INDICATIONS: Used to lessen apprehension; to prevent or control milder types of neurasthenia and hysteria, and nervousness associated with menstrual and climacteric disorders.

ACTIVE CONSTITUENT: Acetylbromdiethylacetyl-carbamid.

DOSAGE: As indicated.

HOW SUPPLIED: Tubes of 20 tablets; bottles of 100 tablets.

—Continued on page 40a

RECTALGAN®

The Liquid Topical Medication

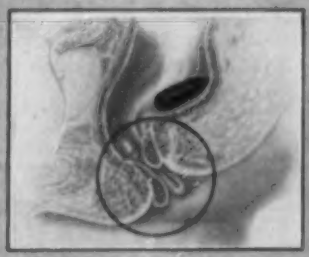
Available at all pharmacies in bottles of 55 cc. (approx. 24 applications) with self-lubricating Rectal Applicator. Also for Office and Hospital use in Pint bottles.

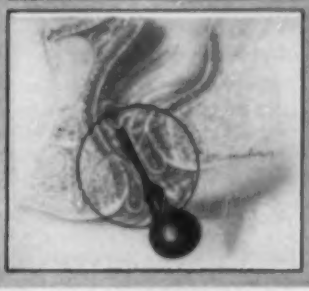
FORMULA: Benzocaine 4.5%, Carbolic Acid 1.75%, Menthol 0.3%, Ephedrine Alk. 0.125% dissolved in Oils (MALLON PROCESS).

Immediate symptomatic relief on application in

HEMORRHOIDS and PRURITUS

NOT A SUPPOSITORY
NOT AN OINTMENT





RECTALGAN *spreads and covers the entire pathologic area.* Its *efficient anesthetic and antipruritic action* is noted almost immediately. Simplicity of use and freedom from distasteful features are appreciated by the fastidious patient.

Relief of

PERINEAL PAIN

in

OBSTETRICS and GYNECOLOGY

RECTALGAN relieves *Perineal Pain* and apprehension in pre and postoperative care, examinations and bowel movements. Also permits correction of painful hemorrhoids.

STRICTLY ETHICAL • ADVERTISED ONLY TO THE PROFESSION

Scientific and Clinical data sent on request

MALLON DIVISION — Makers of RECTALGAN — 100 Varick Street, New York 13, N.Y.

Division of

—Continued from page 38a

Thrombodent Dental Cones

11-50

MANUFACTURER: Sharp and Dohme, Inc., Philadelphia 1, Pa.

INDICATIONS: To accelerate firm clot formation and minimize infection following oral surgery.

ACTIVE CONSTITUENTS: Each Cone contains 1 unit of human thrombin, enough to clot 1 cc. of normal blood in less than one minute, combined with 1 mg. of tyrothricin, which is effective against many of the microorganisms present in the oral cavity they may contaminate postoperative dental wounds.

DOSAGE: Topically applied.

HOW SUPPLIED: In bottles of 12 and 50. The highly absorbent cones are protected from moisture by a dessicant in a pocket at the bottom of the bottle and the new type polyethylene snap cap, an almost perfect barrier to water vapor and air.

Chloresium Powder

11-50

MANUFACTURER: Rystan Company, Inc., 7 N. MacQuesten Parkway, Mount Vernon, N. Y.

INDICATIONS: A therapeutic chlorophyll preparation for the treatment of peptic ulcers.

ACTIVE CONSTITUENTS: Water-soluble derivatives of chlorophyll plus the antacids, aluminum hydroxide and magnesium trisilicate in a base of dehydrated powdered okra. Each individual packet (1 dose) contains 1.8 Gm. of powder.

DOSAGE: The average dosage is 5 powders (individual packets) daily—one upon arising, one upon retiring, and one after each meal (1½ hours after meal). Powder is placed on tongue and swallowed with the aid of a small amount of water. Fluids or solids taken within one and one-half hours after taking powder lessen effect of powder and should be avoided whenever practicable.

HOW SUPPLIED: In a carton containing 25 individual glassine packets.

Edrisal with Codeine

11-50

MANUFACTURER: Smith, Kline and French Laboratories, 1530 Spring Garden St., Philadelphia 1, Pa.

INDICATIONS: In dysmenorrhea, early pain in malignancies, and following surgery or childbirth. It is also indicated in these commonly encountered painful conditions: colds, grippe and sinusitis; sprains, bruises and lacerations; injuries to extremities; common or migraine headache; shingles; after minor surgery; and after dental extractions.

ACTIVE CONSTITUENTS: Each tablet contains: codeine sulfate, ¼ gr.; racemic amphetamine sulfate, 2.5 mg.; acetylsalicylic acid, 2.5 gr.; phenacetin, 2.5 gr.

DOSAGE: One or two tablets repeated every three hours if necessary. Contraindications: Patients sensitive to ephedrine-like compounds. Use with caution in patients with coronary disease or other cardiac conditions in which vasoconstrictors are contraindicated.

HOW SUPPLIED: In bottles of 50 tablets.

Vasoxyl-P

11-50

MANUFACTURER: Burroughs Wellcome and Co. (U.S.A.) Inc., Tuckahoe, N. Y.

INDICATIONS: This combination of the new pressor drug Vasoxyl with a local anesthetic is for the convenience of those who wish to give the local anesthesia at the site of lumbar puncture, and to make the intramuscular injection for pressor action, at the same time, as a single operation.

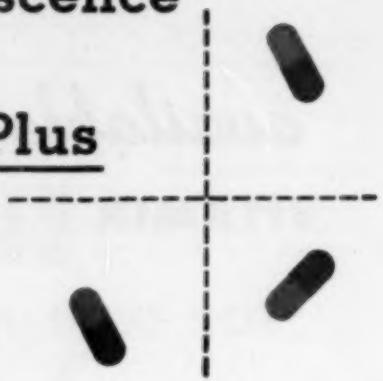
ACTIVE CONSTITUENT: Methoxamine hydrochloride 15 mg. in 1 cc. procaine hydrochloride 1 per cent.

DOSAGE: After injecting intradermally 0.1 to 0.2 cc. of the solution the needle is inserted deeply into the muscle tissue and the balance of the solution is injected. The amount of solution used for the intramuscular injection will depend on the dose desired, usually 10 to 15 mg. of methoxamine hydrochloride (0.7 to 1 cc. of Vasoxyl-P Solution).

HOW SUPPLIED: Boxes of 12 and 100 ampuls.

Indication: Convalescence

Prescription: Feosol Plus



"A reconstructive tonic"

For those ill-defined secondary anemias—of convalescence, adolescence, pregnancy, etc.—where more than just iron is needed, Feosol Plus is the *logical therapy*. Feosol Plus corrects not only the iron deficiency but also other metabolic deficiencies which may co-exist.

Each Feosol Plus capsule contains:

Ferrous sulfate, exsiccated	200.0 mg.
Desiccated liver, N.F.	325.0 mg.
Folic acid	0.4 mg.
Thiamine hydrochloride (B_1)	2.0 mg.
Riboflavin (B_2)	2.0 mg.
Nicotinic acid (Niacin)	10.0 mg.
Pyridoxine hydrochloride (B_6)	1.0 mg.
Ascorbic acid (C)	50.0 mg.
Pantothenic acid	2.0 mg.

Feosol Plus by no means replaces 'Feosol'—the standard therapy in simple iron-deficiency anemias.

Smith, Kline & French Laboratories, Philadelphia

Dosage—3 capsules daily, one after each meal

How Packaged—in bottles of 100 capsules

'Feosol Plus' T.M. Reg. U.S. Pat. Off.

cough control plus...

BENYLIN EXPECTORANT relieves harassing cough safely and rapidly; and it alleviates nasal stuffiness, sneezing, lacrimation and bronchial congestion by combining well-established antitussive agents with Benadryl® hydrochloride (diphenhydramine hydrochloride, Parke-Davis).

BENYLIN Expectorant

Trade Mark

BENYLIN EXPECTORANT contains in each fluid ounce:

Benadryl hydrochloride	80 mg.
Ammonium chloride	12 gr.
Sodium citrate	5 gr.
Chloroform	2 gr.
Menthol	1/10 gr.

BENYLIN EXPECTORANT is available in 16 oz. and gallon bottles.

- ***for promotion of drainage:*** BENYLIN EXPECTORANT liquefies and aids removal of irritating and infection-laden bronchial secretions.
- ***for relaxation of spasm:*** BENYLIN EXPECTORANT exercises helpful spasmolytic effect on irritated, constricted bronchi.
- ***for mucosal decongestion:*** BENYLIN EXPECTORANT exerts a welcome decongestive action on the respiratory tract.

dosage: One to two teaspoonfuls every two to three hours. Children, ½ to one teaspoonful every three hours.

Supplied in a pleasantly-flavored demulcent vehicle which is acceptable to patients of all age groups.

PARKE, DAVIS & COMPANY

MEDICAMENTA VERA

now to sleep—
perchance to dream
undisturbed
by night-time ***itch***

EURAX®

ANTIPRURITIC CREAM

EURAX antipruritic cream, applied to the itching area before retiring, is your patient's best assurance of a full night of undisturbed sleep.

A totally new antipruritic . . . EURAX, original product of Geigy research . . . sets new standards in the treatment of pruritus. In a carefully controlled study[1] EURAX provided "excellent (complete) relief" in 66.2 per cent of cases, and "moderate (considerable) relief" in 27.4 per cent. In most instances a single application ensured relief for 6-8 hours or more. In no case did the cream lose its effectiveness on continued application.

Not an antihistaminic . . . not a -caine derivative . . . not a phenol preparation . . . EURAX gives quicker, longer-lasting itch control with notable absence of local irritation, sensitization or systemic toxicity.[2]

As a specific in the treatment of scabies EURAX Cream in a single application eradicates the infection in over 90% of cases.[3] A second application gives practically a 100% cure rate.[4] No prior bathing or scrubbing required. Bacteriostatic, EURAX accelerates healing in infected scabies.

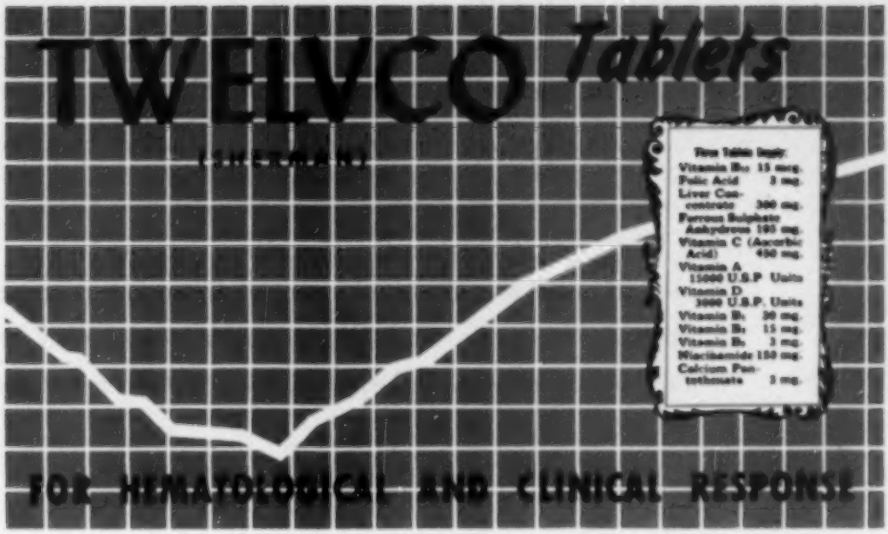
1. Couperus, M.: J. Invest. Dermat. *13*:35, 1949.
2. Patterson, R. L.: Southern M. J. *43*:449, 1950.
3. Peck, S. M. and Michelfelder, T. J.: New York State J. Med. In press.
4. Tronstein, A. J.: Ohio State M. J. *45*:689, 1949.

Geigy

EURAX (brand of crotamiton) Cream: 10% N-ethyl-o-crotonotoluide* in a vanishing cream base supplied in tubes of 20 Gm. and 60 Gm. and jars of 1 lb.

*U. S. Pats. #2,505,681 2,505,682 E-19

GEIGY CO., INC., Pharmaceutical Division, 89-91 Barclay St. • New York 8, N. Y.



B_{12} • LIVER • FOLIC ACID • IRON • VITAMINS •
in One Specially Stabilized Tablet

HEMATOLOGICAL response to Twelvco is gratifying because its broad formula assures effective therapy for many common anemias—macrocytic, microcytic, and those of obscure type or origin. Three tablets daily provide adequate dosage.

CLINICAL response is accelerated by correction of co-existing multiple vitamin deficiencies which so often contribute to the clinical findings in anemias. Massive multiple vitamin therapy is provided by only three Twelvco tablets daily.

TWELVCO TABLETS—One T.I.D. takes the place of two separate prescriptions and at one low cost to the patient.

LITERATURE SUPPLIED TO PHYSICIANS ON REQUEST

Why not post yourself on the exceptional therapeutic value and data surrounding the use and administration of Twelvco Tablets? Mailed on request.

Available in bottles of 50.

SHERMAN LABORATORIES
G. H. Sherman, M. D., Founder
BIOLOGICALS • PHARMACEUTICALS
DETROIT 15, MICHIGAN

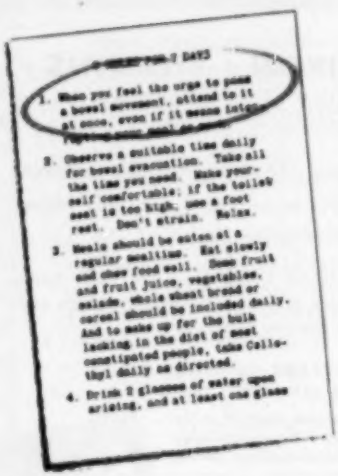
The physician knows

. . . but the patient too seldom appreciates

the penalty of postponement.

"Failure to answer the call to stool"[1] is one of the most common causes of constipation. As rectal reflexes are dulled, fecal accumulation, inspissation and subsequent atony make evacuation progressively more difficult.

An aid to patient-education:



1. When you feel the urge to pass a bowel movement, attend to it at once, even if it seems inconvenient.
2. Observe a suitable time daily for bowel evacuation. Take all the time you need. Make yourself comfortable; if the toilet seat is too high, use a foot rest. Don't strain. Relax.
3. Meals should be eaten at a regular mealtime. Eat slowly and chew food well. Some fruit and fruit juice, vegetables, salads, whole wheat bread or cereal should be included daily. And to make up for the bulk lacking in the diet of most constipated people, take Cellothyl daily as directed.
4. Drink 2 glasses of water upon arising, and at least one glass

Prompt response to physiologic urge **is one of the "7 Rules for 7 Days," outlined in a simple leaflet designed for better patient-understanding, to overcome what are called "improper habits . . . which either singly or combined" cause constipation.[1]**

Available to physicians:

Pads of the "7 Rules" may be had on request. Just write "7 Rules" on a prescription blank and send to Chilcott Laboratories, Morris Plains, New Jersey.

An aid to physiologic correction:

Cellothyl, physiologically correct bulk, may be prescribed to assist in establishing the normal peristaltic reflex.

A high percentage of good results obtained both in clinic and private practice

In 80 to 92% of patients in private practice[2,3] constipation was corrected with Cellothyl. Even in obstinate clinic-treated cases,[1] it was found that *years of constipation can be corrected in a matter of days* with Cellothyl.

These gratifying results can be duplicated in your own practice by incorporating Cellothyl Tablets (physiologically correct colloid) into a sensible two-part anticonstipation regimen such as these investigators found so successful.

Part I PHILOSOPHY OF CORRECTION

To assure a proper "mental attitude . . . the simple rules of bowel hygiene"[3] are explained. Effort is directed against poor diet, cathartic abuse, etc.,—and the fact stressed that the effect of lifelong habits which *cause* constipation cannot be nullified overnight. As a reminder of your advice, you may want to give the patient a copy of the leaflet "7 Rules for 7 Days," which is available on request.

Part II PHYSIOLOGY OF CORRECTION

Since explanation and advice often fail to alter deeply ingrained habits,[1-3] physiologic therapy with Cellothyl is an important part of the anticonstipation program.

Cellothyl is physiologically correct: following the normal digestive gradient, Cellothyl passes through the stomach and small intestine as a fluid, then thickens to a smooth gel in the colon to provide bulk where bulk is needed for soft, moist, easily passed stools.

Because of the unhurried, physiologic manner in which Cellothyl acts, enough time must be allowed for it to reach the colon before the first normal well-formed stool results. With sufficient bulk to stimulate intestinal motility and mass reflex, the patient may, "in the course of a few days . . . be able to resume more normal bowel habits."[4]

Dosage: 3 Tablets t.i.d., each dose with a full glass of water, until normal stools pass regularly. Then reduce to minimum levels for as long as required. *To "wean" the cathartic addict,* ½ the usual laxative dose may be given together with Cellothyl for several days, then ¼ the usual dose, with Cellothyl, then Cellothyl alone. Daily fluid intake must be high.

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2. Musick, V. H.: J. Oklahoma M. A. 43:360, 1950.

3. Schweig, K.: New York State J. Med. 48:1822, 1948.

4. Council on Pharmacy and Chemistry: J.A.M.A. 143:897, 1950.

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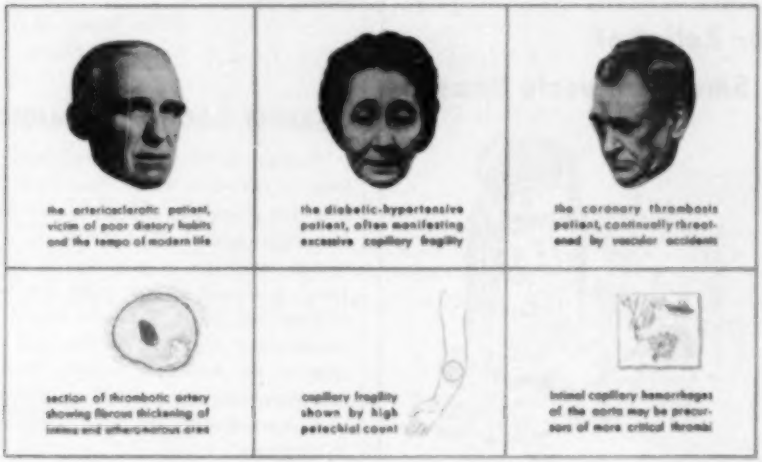

the arteriosclerotic patient, victim of poor dietary habits and the tempo of modern life

the diabetic-hypertensive patient, often manifesting excessive capillary fragility

the coronary thrombosis patient, continually threatened by vascular accidents

section of thrombotic artery showing fibrous thickening of intima and atheromatous area

capillary fragility shown by high petechial count

intimal capillary hemorrhages of the aorta may be precursors of more critical thrombi

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LETTERS TO THE EDITORS

—Continued from page 30a

subjects covered. This should certainly furnish a valuable service to practicing physicians."

F. M. Acree, M.D.
Greenville, Miss.

AGAINST SOCIALIZED MEDICINE

"Robert K. Godwin complained in a letter to the editor of the New York Times that the American Medical Association had appropriated '$1,100,000 on a one-month campaign to promote its point of view.' I should like to point out to Mr. Godwin that the A.M.A. was forced to do this in order to bring the other side of the story to the American people. For some time now, vast sums of tax-payers' money have been made available to Washington bureaucrats to spend propagandizing their views.

"Moreover, Mr. Godwin implies that there is a demand for socialized medicine by the public. This is not true. That there is a demand for better medicine, yes; but better medicine is not synonymous with socialized medicine."

Fred D. LaRochelle, M. D.,
Springfield, Mass.

REFRESHER ARTICLES

"I have found your articles in MEDICAL TIMES always of the highest degree. They are always excellent refreshers; and plus that, they present the little extras which teach me a great deal, the kind of inside information I generally have to obtain from some consultant.

"Thank you for the issues of the past and I always look forward to future publications."

Sam Frankuchen, M.D.
Brooklyn 6, New York

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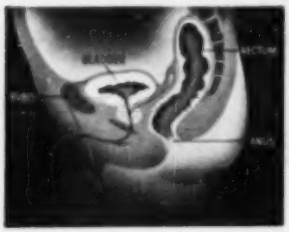

THE PERSISTENCE OF CURE

obtained with SULFATHALIDINE phthalylsulfathiazole is ascribed primarily to two factors: elimination of the source of infection from the bowel may protect the tissues of the urinary tract against recurrent infection by affording opportunity to develop natural resistance. The bacteriostatic effect of the drug on organisms of the gastrointestinal tract may also block the escape of these organisms into the urinary tract.

CLEAR, SPARKLING URINE

is usually obtained within one week after the beginning of THALEXYL therapy.

Prompt relief. When THALEXYL capsules are administered in acute and chronic urinary tract infections, pain and discomfort are quickly relieved, and the urine usually becomes clear and sparkling within one week. Results are due to double antibacterial action of SULFATHALIDINE in the lower bowel and hexylresorcinol in the urinary tract, where the latter also exerts a pronounced analgesic effect, bringing relief from vesical irritability, burning, frequency, and tenesmus. Medication should be continued for three weeks, regardless of symptomatic and bacteriologic improvement, to minimize the possibility of recurrence. Sharp & Dohme, Philadelphia 1, Pa.

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Thalexyl Formula:	
Sulfathalidine phthalylsulfathiazole	0.5 Gm.
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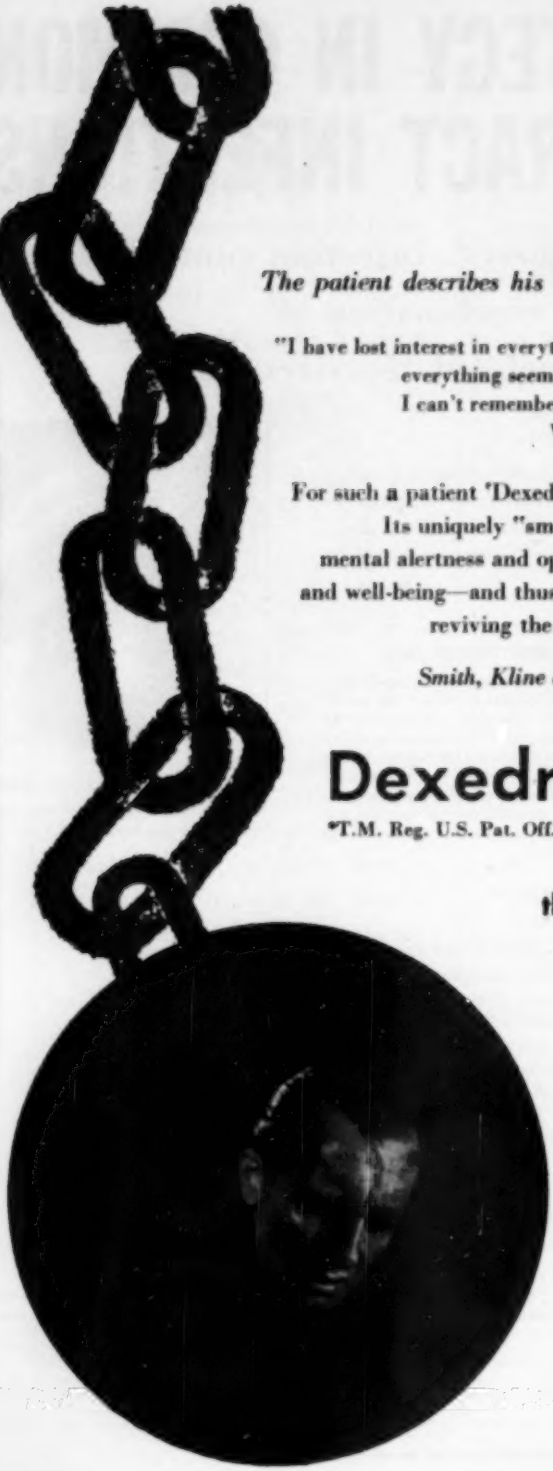
Supplied in bottles of 100 capsules, Thalexyl capsules are easily swallowed because of their distinctive elongated shape.



The patient describes his **depression:**

"I have lost interest in everything—I have no ambition any more—
everything seems futile—I feel frustrated and lonely—
I can't remember or concentrate—I am *all slowed up.*"
Washburne, A.C.: Ann. Int. Med. 32:265, 1950.

For such a patient 'Dexedrine' Sulfate is of unequalled value. Its uniquely "smooth" antidepressant effect restores mental alertness and optimism, induces a feeling of energy and well-being—and thus has the happy effect of once again reviving the patient's interest in life and living.

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Personal Cleanliness

A Basic Problem in Hygiene and Public Health

THEODORE ROSENTHAL, M.D.*
New York, N. Y.

It is trite to say that many great problems are solved, at least in part, by obvious answers. An investigator may have worked long and assiduously only to discover that the solution to his search lay before him. Intensity of effort and great concentration have caused many of us to overlook readily perceivable evidence. We seldom stumble and fall on large rocks, these we circumvent. Yet we fail to notice the small pebbles—over these we fall! Thus, in the field of preventive medicine, we are so well aware of the basic, self-evident truths that we frequently become casual in our advice to patients. We credit them with understanding and knowledge which they do not possess.

Many of use have wondered with Gregg, "how long will it take the general public to escape from the traditional view that disease is something you are lucky enough to escape and come to realize that most diseases are conditions you can be active and intelligent enough to avoid."[1] Success in avoiding diseases, however, does not necessarily mean employing immunizing agents or "miracle" drugs. Patients should be taught that which every physician knows, that the greatest advances in public health have been produced by the application of simple hygienic principles which now seem so commonplace that it is easy for patients to overlook them. With full realization of modern scientific achievements, the physician must make the patient realize that the avoidance of disease may depend, in many cases, on such basic matters as soap-and-water cleanliness.

Pillsbury[2] noted that the normal human skin harbors an enormous number of bacteria which are ordinarily harmless. When the integrity of the skin is disturbed, harmful bacteria readily become well established residents of the diseased area. His suggested treatment regimen against superficial infections of the skin begins with "thorough gentle cleansing of the involved site by means of soap and water."

Communicable diseases have not yet disappeared despite the medical advances of the past few decades. Epidemics are far from unknown; witness the perennial "polio scares." Until the discovery of specific prophylactic agents, the prevention of such diseases as poliomyelitis must depend largely upon general measures. General measures can be effective only if they are applied habitually by the patient in day-to-day living. To quote Gregg again, "The wisest course for us as doctors is to inform and instruct the public, constantly and competently, for the education of the public is the one inexhaustible source of strength in promoting the public health."[1]

* Special Consultant, U.S.P.H.S.; Director, Bureau of Adult Hygiene, New York City Department of Health.

This may seem elementary simply because a discussion of most public health measures is apt to seem prosaic. The physician can, however, find many opportunities for emphasizing homely truths. School health authorities have learned to take advantage of proper timing in so instructing children. In the fall, for example, if there has been an epidemic of polio during the summer, interest in control of communicable diseases of all types may arise from this center of interest and fear of polio. In the winter-time, when the incidence of respiratory diseases is highest, the same authorities may originate a program by inquiring as to why so many children are absent from school with colds. In the Spring-time, when the children are thinking ahead to their summer vacations, inquiry as to their projected vacation plans may lead to a teaching unit in safety education, such as traffic safety, water safety, camping safety and the like.[3]

Health education rests upon the premise that scientific fact does not exert a favorable influence until it has been disseminated to those who will make use of it. The fact, for example, that bottles used in infant feeding need to be sterilized, did not contribute to the reduction of infant mortality until it became known to mothers and was applied by them. Health education is concerned with much more than new discoveries. It must present, at appropriate times and in a suitable manner, the knowledge about health and disease which has accumulated over the years.

Obviously, the physician has a great advantage over the school authorities. Whereas they must create opportunities for making health education palatable, the physician is sought out at exactly the time the individual is most concerned about his health and, therefore, most receptive to suggestions on how to preserve or restore it.

When prescribing a course of therapy, it is always well to include recommendations for general health measures whenever they are likely to prove beneficial. In such instances, complete details should be given so that there are no misunderstandings about precisely what is expected of the patient. It should be realized that it is often necessary to give explicit directions even when advising on commonplace matters such as personal cleanliness. As a tactful method of introducing the somewhat delicate subject of personal hygiene, it is often well to ask patients what they consider to be the most important substance ever developed for the prevention of disease and pestilence. Almost without exception, they are surprised to learn that the answer is not a "magic bullet" — some "miracle drug" — or the latest antibiotic, but the humble substance—soap.

If they appear to be incredulous, one may quote Meredith's statement, "no single article can compare with soap in respect to the amount of sickness and death prevented by its use. Epidemics rage where little soap and water are used for personal domestic purposes. Uncleanliness of habits of living may be considered responsible for more ill health than any other one cause."[4]

The public likes specific advice, even on such matters as personal cleanliness. On appropriate occasions during pregnancy, for bedfast patients, or when there is a newborn infant—many physicians supply their patients with printed instruction sheets. There are similar instruction sheets available for acne patients. Patients, however, will not follow such directions very faithfuly, if the physician just hands them out routinely. It may be helpful in winning their cooperation to devote a little time to discussing the instructions with the patient. This is also an excellent opportunity to bring in some general principles of health education. According to a recent survey, countries differ markedly in their per capita

consumption of soap as well as the incidence of disease and death rates. The United States leads the world with a per capita soap consumption of 27.2 lbs. India and China are at the bottom of the list with the per capita consumption of 0.25 lbs. and 0.125 lbs. respectively.

We cannot, however, rest comfortably in the knowledge that we are the largest consumers of soap in the world. A large amount of this important substance is used for laundering and other purposes. Many physicians will recall their experiences, when internes in public institutions, with patients who rarely if ever bathed. In daily practice we frequently encounter individuals who have a meager, passing acquaintance with any cleansing substance. Would that we could quickly remedy these conditions!

Fortunately, American industry and ingenuity supplies us with soaps and detergents of infinite variety. Special agents are available for cleaning everything from a glass to a complete hospital or home.

Interesting enough is the fact that the mechanism of the detergent effect is not fully understood. When used as a skin cleansing agent it appears to involve a rupture of the interface between the skin and the substances deposited on it with the attendant emulsification of such substances.

The mechanical processes of scrubbing and rinsing then remove the emulsification product. The factors determining the efficiency of the detergent action are many. These include the character of the skin, the nature of the soil on it, the kind and character of the soap, the time of contact between the skin and the soap solution, the temperature of the water and the extent of the chemical reaction. A second useful effect of soap is its softening action on the horny layer of the epidermis, the extent of which is determined especially by the alkalinity of the soap and also, to a degree, by the composition of the fatty acids. Another effect of soap is its germicidal action. While it is agreed that the principal way in which soap and water reduce bacterial contamination is by the removal of organisms, there is ample evidence that soap also acts as a bactericidal agent. Walker found six different varieties of soap to be effective within two and a half minutes following application of solutions ranging in concentration from 1:100 to 1:1000, in destroying pneumococci, streptococci, gonococci; certain species of bacteria, notably staphylococci and typhoid bacilli, did not appear to be affected.[5] Inasmuch as a strong lather, as ordinarily obtained in washing hands, may reach the concentration of five per cent of soap, it is obvious that the germicidal effect of soap is of significance. A fourth effect attributed to soap is a detoxifying action; experiments have shown that certain soaps when used in sufficient quantity are able to detoxify tetanus or diphtheria toxin.[6]

Medicated soaps are sometimes employed; the medicament may be intended to increase the bactericidal efficiency of the soap or to bring about some therapeutic action. It is not clearly apparent that the incorporation of medicaments enhances the value of soap, chiefly because, in most instances, the time of exposure to the medicament is very short. On the other hand, they are not generally likely to be harmful. Most germicidal material, when added to soap, becomes inactive and reduces the efficiency of the soap. Such combinations are often irritating.[7]

Soaps containing an abrasive were developed primarily to aid in removing grease and other heavy dirt from the skin. These have been manufactured with many different abrasives such as coarse sand, bentonite, sawdust, oatmeal and very finely pulverized pumice. There is evidence which indicates that coarse, hard materials such as sand may damage the skin if used repeatedly. This property has been utilized in the therapy of acne pits of the face. McEvitt[8] has recently

described his technic of abrasion of the skin with sandpaper in the treatment of severe pitting from acne. Oatmeal and similar soft substances apparently add little to the mechanical cleansing action of soap. Between these two extremes lie materials sufficiently hard to enhance the cleansing action by abrasion, yet so finely ground that they may be safe for the skin.

A soap containing a fine abrasive is, naturally, more effective in removing sebum from the surface of the skin and enhances the mild keratolytic action of the soap by mechanical scouring.

Patients with oily skins are especially benefited by the use of a non-irritating pumice-containing soap.* Those whose skins are well supplied with sebum are definitely benefited and will show a preference for this kind of soap. The use of soaps containing abrasives, therefore, may be of value in the treatment of conditions associated with oiliness of the skin.[9]. There is some evidence to indicate that pumice-containing soap is of benefit as an adjunct in the treatment of acne, and that no significant degree of discomfort is produced by the abrasive soap.[10, 11, 12]

This soap, which contains finely ground pumice of the type used by dentists for tooth prophylaxis, milled to uniform particle size, is a highly satisfactory product. In every square inch of lather of normal thickness, as one would find while washing, there are in excess of 50,000 very fine particles of pumice. When suspended in lather the pumice is so finely divided that it defies the tactile sense.

Because it lacks the expected irritating properties, and due to the additional mechanical cleansing properties which are to be found in a mild abrasive soap, it may be recommended for all purposes. However, and regardless of the type of soap or detergent under consideration, it is to be hoped that the general public will some day share the physician's respect for soap-and-water.

Medical and public health workers established the role of dirt and filth as disease carriers. Perhaps some day public health education will be able to make universal cleanliness the custom for all people and thus eliminate a high amount of disease and misery.

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* An excellent pumice-containing soap readily available in the United States is Lava soap, manufactured by Procter and Gamble.

'A' Average Not Required for Admission to Medical Schools

An A average in premedical college work is not required for admission to medical schools, Dr. Donald G. Anderson of Chicago, Secretary of the American Medical Association's Council on Medical Education and Hospitals, said recently.

According to a recent report to the council, 10 per cent of students admitted to medical schools in the United States during the academic year 1949-1950 had no better than a C+ scholastic average in premedical college work. Many others, Dr. Anderson pointed out, had B averages.

Infant Feeding

This summarization attempts to cover the essential therapeutic information on the subject and is designed as a time-saving refresher for the busy practitioner.

The feeding of the infant progeny of the human race has been of interest in every generation past and will probably be in every generation yet to come. The nutritional start which the infant receives in life is vitally important for it is a determining factor in the growth and development of the child and in the later health of the adult.

Breast Feeding In recent years there has been a definite movement on the part of the pediatrician to attempt to increase the incidence of breast feeding.[1] Human milk is the natural and ideal food for full term infants during at least the first six months of life. However, many infants receive none. The most formidable of all obstacles to breast feeding has been the indifference and even opposition of a large segment of the medical profession and of hospital personnel.[2] Then too, many modern mothers are reluctant to nurse their offspring because it will place a limitation upon their activities and because they fear that it will cause them to lose breast tone and gain weight. Neither of the expectant mother's objections need be true and, it therefore becomes the responsibility of the physician to prepare her psychologically and nutritionally during the gestational period for the pleasure of nursing her baby.

Advantages It is a natural phenomenon that nurslings do well on their own natural supply. This does not mean that the milk of one species will not nourish one of another species, as evidenced by the many human offspring nourished by the milk from a cow. However, human milk for the human infant has many advantages.[3] It is more easily digested and is readily available at the proper temperature. No preparation is necessary, it is more economical, errors in preparation are avoided as is contamination of the formula by bacteria or other substances. There are fewer and less serious feeding difficulties with breast fed infants than with artificially fed infants. The psychological factors involved in improving the mother-child relationships cannot be denied.[4] However, a mother can provide the necessary sense of security and affection to a bottle fed baby. A few years ago the incidence of mortality among artificially fed infants from bacterial contamination was much higher than that among breast fed babies, but at the present time there is no distinct difference in this respect with the possible exception of the very low income groups.

There are no real disadvantages to breast feeding for the normal full term infant if the mother's supply is ample and her diet sufficient in proteins and vitamins. There is evidence,[5] however, to indicate that a higher protein content may be necessary for the feeding of premature

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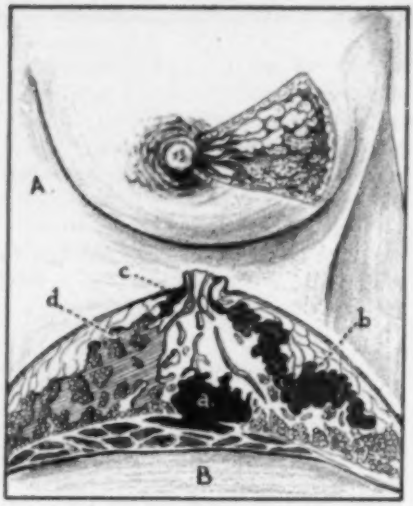
Permanent library binders, sufficient to hold 24 different "refresher" reprints, sent postpaid, $2.50.

infants. There seems to be no real reason for the average normal mother not to be able to provide ample milk for her baby. Adequate sleep, moderate exercise, freedom from worry and an adequate diet should provide the necessary means to attain that end. Within limits the normal breast secretes according to demand.[6] Therefore, manual or mechanical emptying of the breast should be attempted as a stimulus to secretion in cases where the supply is not adequate.

Contraindications There may be contraindications to nursing if the infant is premature and unable to suck or is generally debilitated or, because of cleft lip or palate. In such cases it is often desirable to mechanically express the milk and feed the infant from a bottle. Occasionally an infant will prove to be allergic to his mother's milk. If the allergen cannot be eliminated this then becomes a contraindication to nursing. If the mother is unable to provide at least 50 per cent of the caloric requirements of her offspring breast feeding should be discontinued. This does not mean that a single daily supplement of an artificial milk formula is disadvantageous. Many pediatricians practice such a program for it gives the mother more freedom, if the supplement replaces one of the feedings during the daytime, and it also makes later weaning less difficult.

From the mother's standpoint fissured nipples, severe mastitis, systemic infections, and pregnancy preclude further nursing. It has been thought, also, that the nursing of an Rh positive infant by an Rh negative mother is contraindicated but some rather recent work seems to indicate that this is harmless.[7]

Initiation of Breast Feeding Newborn infants should have nothing for the first 8 to 12 hours. Then, or as soon as the mother's condition permits, the infant should be placed at the mother's breast to obtain colostrum. As a prelacteal feeding, after 12 hours and before the



A. Normal lactating breast with section cut away to show lactiferous ducts, sinuses, and glands.
B. Horizontal section viewed from below showing infections of the breast.
a. Submammary abscess
b. Parenchymatous mastitis
c. Subareolar abscess
d. Phlegmonous inflammation

mother can nurse, water or about 5 per cent carbohydrate in water may be given at 4 hour intervals. Colostrum contains a large amount of protein and vitamin A but little carbohydrate and fat. The infant should be placed at the breast and allowed to root for the nipple every 8 hours during the second 24 hours of life and every 4 hours the third day. Water or a prelacteal formula should be offered following each of these feedings to insure an adequate fluid supply. The newborn infant requires a proportionately higher fluid intake during the first few days of life. However, water or prelacteal feedings should be kept to a minimum for it is very important that the infant empty the breasts if lactation is to be established. By the fourth or fifth day the milk supply should be established.

At every feeding the infant should be hungry, dry, at a comfortable temperature, and at a comfortable position. Likewise, the mother should be comfortable

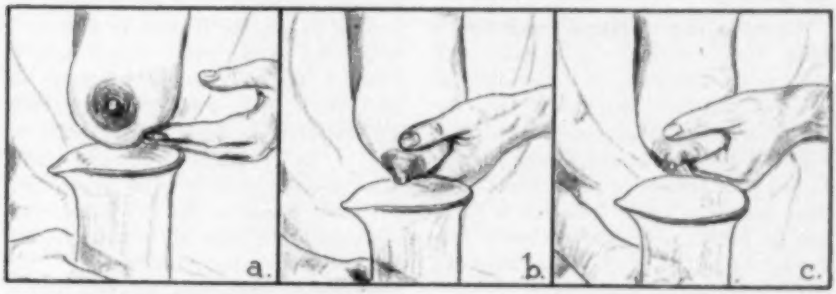
and at ease. If these factors are not carefully considered and provided the whole process may be jeojardized.[8] Some pediatricians prefer the use of one breast at a feeding while others prefer the use of both breasts using opposite sides first at alternate feedings. The latter technique probably has particular value when the supply is not overly plentiful and the baby is not able to obtain sufficient from one breast at a feeding. Usually the initial feedings require about 5 minutes at each breast and later, after milk has come in and the baby has become stronger, about 15 minutes are required to satisfy the needs of the infant.

Self Demand Feeding Considerable interest is being displayed in self demand feeding for adjusting the frequency of nursing.[9] By this is meant allowing the infant to indicate when he is hungry by crying and then feeding him. The rigid 3- or 4-hour schedule may not correspond to the infant's natural hunger rhythm. This may produce feeding difficulties such as refusing certain feedings, taking only small amounts, or hungrily gulping milk and with it considerable air with subsequent colic. On the other hand it is important to provide sufficient spacing to permit emptying of the stomach and the development of hunger sensations. An important difficulty is also often encountered with the attempts of a mother to differentiate hunger crying from other interfeeding crying.

Weaning is usually begun after about the sixth month as the breast feedings are gradually replaced by artificial feedings. The advantages of breast feeding over artificial feeding are largely lost by this time but, there is no harm in continuing one or more breast feedings into the second year provided it does not interfere with the establishment of mixed feeding.

Artificial Feeding Artificial feeding is the term applied to the nonbreast milk feeding of infants during the time when the infant is normally expected to be receiving human milk. The basis for most of the artificial feeding formulas is cow's milk in the whole state or some modified form.

Present-day preparations have considerably simplified the procedure for the preparation of artificial formulas and have, by the same step, helped to eliminate some of the errors often made by thoughtless or ignorant parents. Probably the most significant improvement has been in the reduction of bacterial contamination in the products made available to parents, and in the public health efforts to educate parents in proper methods of cleanliness in the preparation of the baby's formula. This has significantly re-



Method used in manual expression of mothers' milk.
a. First two fingers are placed below and the thumb above the edge of the pigmented areola.
b. Pressure is exerted on the areola with gentle follow-up action converging at the base of the nipple.
c. A slight pull at the base of the nipple coaxes the milk out.
(after publication of the New York Mothers' Milk Bureau)

duced the morbidity and mortality from gastrointestinal infections during the first year of life.

Although it is true that infants can now be fed reasonably well by artificial means and that it is usually impossible to distinguish individual infants who are breast fed from those who are artificially fed, artificial feeding should still be considered a substitute for breast feeding and not an alternative.[10]

Technic of Artificial Feeding The personal preparation of the mother and infant is very similar to that already mentioned for breast feeding. In addition the milk formula must be warmed to a comfortable degree, as usually tested by dropping on the wrist, and the sterile nipple must be applied without contaminating it. The holes in the nipple should be of such size that the milk will drop freely but will not stream forth. Feeding should not be unduly prolonged, an average being from 15 to 20 minutes. The properly fed baby may not empty the bottle at every feeding but he will take as much as he needs, provided eructation of swallowed air is encouraged during the feeding as well as afterward. When the feeding is complete and the swallowed air is eructed the infant is preferably placed in his crib on his abdomen or on his right side in order to facilitate emptying of the stomach into the intestine.

Comparison of Human and Cow's Milk Some reference has already been made to the differences in composition between human milk and cow's milk, but the mean values as presented in tables 1 and 2 by Jeans[11] will give a more concrete picture. It should be remembered that these are mean values for there is variation in human milk and in cow's milk during the various stages of lactation and from individual to individual.[12]

The water content of both human and cow's milk are about the same (about 87 per cent) and the caloric value is likewise about the same (about 20 calories per fluidounce). However, there is both a quantitative and qualitative difference in the protein content. It will be seen from the figures given in table 1 that human milk contains about 1.25 per cent protein as compared with 3.4 per cent in cow's milk. Also, that human milk is composed of about 60 per cent lactalbumin and 40 per cent casein as compared with 85 per cent casein and 15 per cent lactalbumin in cow's milk. The normal thriving breast fed infant receives about 2.5 Gm. of total protein per Kilogram of body weight whereas an artifically fed infant normally receives about 3.4 Gm. per Kilogram of body weight. This marked quantitative difference results in artifically fed infants usually having about 25 per cent more muscle mass than breast fed babies.

Table 1. Approximate Percentage Composition of Human Milk and Cow's Milk.

Type of Milk	Fat	Sugar	Total Protein	Lactalbumin	Casein	Ash	Calcium	Magnesium
Human	3.5	7.5	1.25	0.75	0.50	0.20	0.032	0.004
Cow's	3.5	4.7	3.4	0.50	3.0	0.75	0.118	0.012

Type of Milk	Potassium	Sodium	Phosphorus	Sulfur	Chloride	Iron	Copper
Human	0.041	0.011	0.013	0.014	0.032	0.0001	0.00003
Cow's	0.155	0.050	0.093	0.033	0.105	0.00005	0.00002

Such difference seems to cause no difficulty in the growth and development of the breast fed infant. However, if an artificially fed infant is given a diet comparable in protein content to that of a breast fed infant there is evidence of poorer tissue turgor and poorer motor development. Thus it would indicate that a higher protein content is required in the diet of the infant receiving cow's milk if satisfactory nutrition is to be obtained.

The fat content of the two milks is approximately the same but the composition of the fat varies considerably. The triglycerides, olein, palmitin, and stearin, account for the major portion of the fat in each case but human milk has a relatively higher proportion of olein,

which is more easily digested. The volatile fatty acids, chiefly butyric, capric, caproic, and caprylic, account for only about 2.5 per cent of human milk fat but for about 27 per cent of cow's milk fat. Although the full term normal infant seems to have comparatively little digestive difficulty with cow's milk the debilitated or premature infant may have such difficulty. When the latter case exists it is well to keep the fat content of the milk formula relatively low.

The total mineral content of human milk is considerably below that of cow's milk. The need for calcium is particularly great during the periods of rapid growth. With both types of feeding there is a decrease in the percentage of calcium in relation to body weight during the first few weeks of life. The artificially fed infant shows a rise in this respect more quickly than does a breast fed infant. When the calcium retention is related to linear growth it is found that the breast fed baby has excellent linear growth despite a much lower calcium retention and grows at a rate definitely greater than that of an artificially fed baby having the same calcium retention. Thus it would seem that the calcium in human milk is utilized much more efficiently than that of cow's milk, but the total retention from cow's milk is greater because of the larger quantity fed.

In premature infants it has been found that human milk cannot be ingested in quantities sufficient to supply the need for calcium unless it is fortified with this mineral. This is an important note for prematurely born infants are especially susceptible to rickets because of the low calcium and phosphorus content of the body at the time of birth[15] and the subsequent high requirements for these minerals in the diet.

The phosphorus requirement of the infant body is directly related to the calcium and nitrogen retention. Thus, the lower phosphorus content of human milk and the higher content of cow's milk are in line with the retentions of calcium and nitrogen previously discussed. Little or no phosphorus is excreted in the urine of breast fed infants but a considerable amount is excreted, with no apparent difficulty, in the urine of artifically fed infants.

The iron content is not sufficient in either source but the iron stores at birth are sufficient to maintain proper hemoglobin levels for several months.[11] Although the iron content of human milk and its utilization are such that nutritional anemia develops much more slowly in the breast fed baby than in an artificially fed baby, iron supplements are necessary after 3 or 4 months of life.

Table 2. Approximate Vitamin Content of Human and Cow's Milk

Average values for each 100 Gm. or cc.

Type of Milk	Vitamin A I.U.	Vitamin D I.U.	Vitamin C mg.	Thiamine mg.	Riboflavin mg.	Nicotinic Acid mg.
Human	290	5.0	6.4	0.013	0.04	0.1
Cow's						
Raw	180	2.5	2.0	0.045	0.20	0.1
Pasteurized	180	2.5	1.1	0.035	0.20	0.1
Evaporated Reconstituted	180	2.5	0.6	0.025	0.20	0.1

The vitamin content of human and cow's milk will vary considerably with the maternal intake. Authorities differ [13, 14] as to their belief whether or not the supply of vitamin A in both milk sources is sufficient. Either source with average content of vitamin A will supply the 1,500 units daily at 6 months of age recommended by the Food and Nutrition Board of the National Research Council. But Stevenson[16] has reported that the daily intake of a 6 month old breast fed infant is approximately 3,250 I.U. of vitamin A. He therefore recommended that the vitamin A content of artificially fed formulas be increased. He also stated that there was some evidence to indicate that the

infant absorbs more completely the vitamin A obtained from breast milk.

Stevenson also found evidence to differ with the Food and Nutrition Board as to the vitamin C requirements. He found that under the same situation the breast fed infant obtained approximately 55 mg. of ascorbic acid a day in contrast to the 30 mg. recommended by the Board. He also postulated a relationship between the differences in the content of these two vitamins in the normal diet of the breast fed and the artificially fed infant with the higher incidence of respiratory infections during the second six month period of life of artificially fed infants.

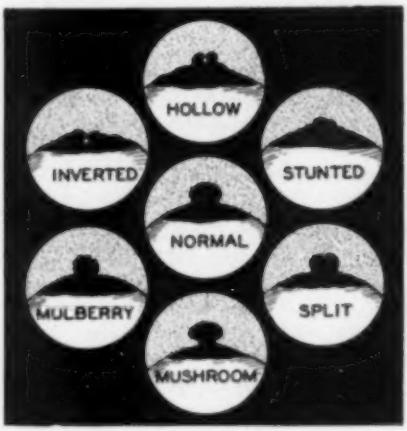
The vitamin C content of human milk probably is most closely related to the intake of all the vitamins. With normal diet, however, the approximate average content is 50 mg. per liter. The boiling and dilution of cow's milk in the preparation of the formula reduces the content of this heat labile vitamin to an extremely low level. It is therefore evident that vitamin C in the form of orange juice should be an early supplement to the artificial diet and is probably desirable even in the diet of the breast fed infant.

The diet of the mother is a very important factor in determining the amount of thiamine found in human milk. As can be seen from table 2 the thiamine content of human milk is normally lower than that of cow's milk but, cow's milk is usually diluted before being given to the infant and it is heated; thus the thiamine content of the cow's milk as given to the infant has been markedly reduced. Actually, the average human milk and the average formula based upon cow's milk contain only the minimum requirement of thiamine.[17] It is therefore evident that early supplement of the diet of the infant with thiamine-containing foods is desirable. The Food and Nutrition Board has recommended an allowance of 0.5 mg. of thiamine for each 1,000 calories consumed in the diet.

A wide variation occurs in the riboflavin content of human milk. The average, however, is only about one-fifth that of cow's milk. Nevertheless the breast fed infant apparently receives ample riboflavin. The actual requirements of this vitamin for infants is a matter not fully substantiated but the Food and Nutrition Board of the National Research Council has recommended a daily allowance of 75 micrograms for each Kilogram of body weight, an amount considered by some to be higher than it need be.

Since the requirement for nicotinic acid can be partly supplied through synthesis within the body from tryptophan, and since milk is a good source of tryptophan, deficiency symptoms rarely develop. If the tryptophan content of the diet should be low the nicotinic acid requirements would be about ten times that of thiamine, or about 4 mg. daily.

Neither human nor cow's milk provide an amount of vitamin D deemed to be necessary. However, the more efficient utilization of the components of human milk, and particularly of calcium and phosphorus, is such that rickets is much less common among breast fed babies



Abnormal types of nipples that cause difficulty in breast feeding.

Position for nursing should be comfortable for both mother and baby.

than among those receiving artificial feeding.

The differences in composition between human milk and cow's milk are quite evident but, as pointed out previously, it is usually difficult to distinguish the normal breast fed infant from the well managed artificially fed infant.

Forms of Cows' Milk Used Raw milk has been forbidden for sale in many parts of the country. It is well known that milk is a good vehicle and a culture medium for pathogenic bacteria, and even certified milk in the raw state therefore becomes potentially dangerous in the baby's formula. Certain bacteria which may not affect older children may cause gastro-intestinal disturbances and diarrhea in infants. Certified milk is rigidly guarded, from the bacteriological testing of the cow and the milk handlers through every step in the handling process, to avoid bacterial contamination. And, it must be admitted that certified milk is the best grade of milk available. Nevertheless, the danger of bacterial contamination in spite of every precaution has led to the general acceptance of pasteurized milk as the milk to use in the baby's formula. In addition to the destruction of all pathogenic bacteria in the pasteurization process the heat alters the casein to some degree so that smaller and somewhat less tough curds are formed in the stomach. Homogenization of milk also has a tendency to reduce the size of the curd and to make it somewhat less tough, both of which are factors in promoting digestibility of the milk in the infant's stomach. From this standpoint pasteurized milk which has also been homogenized is one of the better milks for artificial feeding. It must be remembered, however, that the fat globules in homogenized milk have been broken down into minute particles so that they will not separate and rise to the top (creaming) and, thus, this form of milk cannot be used when a milk of low fat content is desired unless it was so adjusted before being marketed.

Evaporated milk has become very popular as a basis for the preparation of artificial formulas, for several good reasons. It is readily available and relatively inexpensive. It will keep for several months so long as the can is unopened. During the process of heating and homogenization the casein is so affected that the curd produced in the stomach approaches the fineness and softness of that of human milk. The lactalbumin is also apparently altered so that it is less allergenic than fresh milk.

The government has established regulations to which all brands of evaporated milk[18] must conform. Fresh milk is mixed and adjusted to a fat content of 3.7 per cent and then evaporated at 135° C. until 60 per cent of the water has been removed. The milk is then homogenized, cooled, canned, and sterilized at 240° C. Each fluidounce contains about 44 calories as compared with about 20 calories in each ounce of fresh whole milk. Several of the brands of evaporated milk on the market are irradiated to a standard of 135 I.U. of vitamin D to the reconstituted quart or a concentrate of vitamin D is added during the processing to bring the

vitamin D level to 400 I.U. per reconstituted quart.

Condensed milk should not be confused with unsweetened evaporated milk. It is evaporated milk to which about 45 per cent of cane sugar has been added. Condensed milk thus gives a high proportion of carbohydrate and a relatively low proportion of fat and protein and is of little use in infant feeding.

Dried milk[19] is also standardized by government regulations. The fat content is adjusted to 3.5 per cent, the milk is pasteurized and then dried very rapidly to a fine powder form. Dried or powdered milk possesses essentially the same advantages as evaporated milk. In keeping qualities it is distinct in that it requires no refrigeration after the can has been opened. After being opened the can should be kept in a cool dry place, and under such conditions the dried milk will not deteriorate for several days. Dried milk may be reconstituted by the addition of 1 ounce by weight on top of 7 ounces of cool water.

Dried milk is also available as skimmed milk with varying percentages of fat content up to about 1.5 per cent. This means that the protein content is high in proportion to the fat content. It is reconstituted to its original liquid state by the addition of 1 ounce by weight of the dried skimmed milk on top of 9 ounces of cool water. Both the reconstituted and the fresh skimmed milk have limited use in the feeding of infants. It is used as a basis for diets high in protein and low in fat for premature infants, for infants which are over weight, and during convalescence from diarrheal diseases. It is equal in mineral and protein value to corresponding whole milks but the taste is usually less appealing.[20]

The so-called acid milks are prepared in general either by the direct addition of acid or by fermentation from bacterial action. The addition of the acid alters the casein so that a smaller and less tough curd is formed in the stomach. In addition a portion of the high buffer capacity of cow's milk is neutralized so that less hydrochloric acid is required from the gastric juice to digest the milk. The low pH is an aid in retarding bacterial growth[21] but it should not be assumed that acid milks are free from bacterial contamination.

The acid most frequently used to acidify milk is lactic acid. Other acids such as hydrochloric acid, citric acid, and acetic acid (vinegar) may be used. The amount of Lactic Acid U.S.P. required varies with the fat content but milks containing 3.5 to 4 per cent fat require about 6 cc. of lactic acid to the quart. The acid should be added drop by drop to the previously boiled and cooled milk with constant stirring. Rapid addition of the acid will cause curding of the milk. Some large commercial dairies and occasionally hospitals maintain cultures of *Lactobacillus acidophilus* or *L. bulgaricus* for the purpose of producing acid milk by fermentation.

A number of dried lactic acid milk formulas are available on the market.[22] Naturally the dried milk formulas are the forms most available commercially. They provide the good selling point, in most cases, that only water must be added in order to prepare the formula. Several such products are available with a composition approximating that of human milk.[23] These are particularly useful for preparing an occasional or a single daily feeding for infants that are otherwise breast fed. Other proprietary preparations are similar to breast milk except that they have a higher percentage of protein[24]. Also available commercially are a number of preparations of the dried skimmed milk type, that is, they have a high protein content and a relatively low fat content.[25] Occasionally it is desirable to increase the protein content to a still higher level in formulas for feeding during diarrheal conditions or for premature

Position for holding baby to help get rid of the air swallowed during nursing.

and debilitated infants. For such purposes there is available a dried milk protein.[26]

Goat's milk is widely used in some countries for the feeding of infants but in this country it is seldom used except for those infants who are allergic to cow's milk.[27] The composition of goat's milk is similar to that of cow's milk,[28, 29] about 4 per cent protein, 4.5 per cent carbohydrate, and 4 per cent fat, but the curd formed in the stomach is not quite so tough. Evaporated goat's milk is available commercially from several suppliers.[30] The same care should be followed in the selection of the source of goat's milk as for the selection of the source of cow's milk. The goat is rarely a victim of tuberculosis but is highly susceptible to brucellosis.

Milk Substitutes Besides goat's milk there are a number of preparations which are used as substitutes when artificially fed infants are allergic to cow's milk. Most of these fall into the category of preparations which supply the protein as an amino acid mixture. This pre-digested form of protein provides nitrogen in a much more readily assimilable form. This factor suggests another important use of feeding formulas in which the protein is supplied as an amino acid mixture, that being in supplying the nutritional requirements of highly debilitated infants. Some preparations are available for the parenteral administration of amino acid mixtures[31] but parenteral feeding is only an expedient in extreme cases and should be discontinued as soon as oral feeding is possible. Several protein hydrolysates are available for oral feeding.[32] Other commercial formulas[33] combine the protein hydrolysate with carbohydrate, fat, and minerals in order to supply the essential nutritional elements for oral feeding. It should be noted, however, that most of these formulas do not provide the required vitamins and, therefore, a vitamin suplement must be added to the diet. There is difference of opinion regarding the nutritional need for protein hydrolysates by premature infants. Madey and Dancis [34] found that weight gain in infants whose diets were supplemented with casein hydrolysate was no better than that of infants supplemented with whole casein. Young *et al*[35] found that desirable weight gains were achieved only when the calorie content of the diet was increased by the addition of glucose. Jorpes and Magnusson[36] reported that weight gains on human milk were inferior to those made by premature infants receiving human milk and a supplement of casein hydrolysate.

Another protein substitute for use in the formulas of infants allergic to cow's milk is soya bean flour. Preparations[37] containing soya bean flour provide a high protein powder similar in composition to the high protein whole milk powders, but, of course, the protein is a plant protein obtained from soya beans.

Feeding Schedules A strong tendency is developing at the present time to give the infant more latitude in establishing his own feeding habits as to frequency and quantity. When an infant is fed when he is hungry rather than "by the clock" it is felt that many of the rebellions

against eating will be avoided.[38] Likewise, less difficulty will be encountered if the infant is allowed to stop eating when he has had enough, even though the bottle is only partially empty. The primary danger of such a system is probably centered in the difficulty for a mother to interpret a hunger cry from crying caused by other forms of discomfort. If the rest periods of the infant are broken by too frequent and too small feedings the baby is apt to become restless and irritable. It has been suggested that an infant should not be hungry sooner than two hours after a former feeding if the formula is adequate. In most cases this time interval will be longer but it will vary from infant to infant. Premature infants will require more frequent feeding than a full term infant. Most infants will have placed themselves on a self regulated schedule of feedings within 3 months.

The average time interval between feedings for normal full term infants is about 4 hours. During the first month or two feedings must be continued around the clock but at the end of this time the 2 A.M. feeding may be discontinued and the late evening feeding may be dropped as soon as the infant does not awaken for it and when the growth progress is satisfactory without it. By the end of the first year of life most babies are satisfied with the customary 3 meals a day.

Construction of the Formula The average caloric requirements of full term infants are about 110 to 120 calories per Kilogram of body weight. This has lowered to about 100 calories per Kilogram by one year of age. However, no rigid generalization is possible for the formula must be adjusted to the needs and growth pattern of the individual infant. The fluid requirements for an infant are quite high, usually ranging from about 130 to 180 cc. per Kilogram of body weight per day. Most of this liquid is given in the formula but additional water may be required. Usually the infant will regulate his fluid intake provided adequate quantities are offered.

The quantity of formula per feeding varies with different infants and with the same infant at different feedings. A general rule which has been suggested for the estimation of the quantity of the individual feedings is to add 2 to the age in months up to the first 6 months. Rarely should an infant be given more than 7 or 8 ounces of milk at an individual feeding. If the infant still requires more nutriment the balance should be made up of other suitable foods. The quantity of whole milk needed to satisfy the infant during the first six months or so of life is from 1½ to 2 ounces per pound of body weight or 4/5 to 1 ounce of evaporated milk per pound. Sugar is usually added to the milk formula in an amount of ½ ounce or so a day during the first week or two of life and then 1 ounce up until 6 or 7 months of age when it is discontinued. There is some tendency to reduce the amount of sugar added to the formulas in present day practice. In fact, McCulloch reported excellent success in the artificial feeding of infants without the addition of any sugar to evaporated milk.[40] The sugar employed seems to make little difference. Cane sugar is more readily available at a low cost but it has a sweeter taste. Lactose and dextrimaltose preparations probably enjoy the greatest popularity.[39]

Fresh whole milk or reconstituted evaporated milk may be substituted for the formula by the time the infant is 6 to 8 months of age. The minimal quantity from that time on is between 1½ pints and 1 quart a day. There seems to be no advantage in the ingestion of more than a quart of milk a day and it may have the disadvantage of displacing other essential foods.

Supplements to the Milk Diet Ascorbic acid is needed by the artificially fed infant within a week or so after birth. In order to have a blood level comparable to that of breast fed infants the artificially

fed infant will require at least an ounce of orange juice initially and probably 2 or more ounces by the time the baby is 3 months old. Frequently there is encountered feeding disturbances when very small amounts of orange juice are given and so it would seem more desirable to give the young infant 25 to 50 mg. of ascorbic acid in ½ ounce of cooled boiled water. [10] After the amount of orange juice included in the diet has been gradually increased to 2 ounces or more the ascorbic acid may be discontinued. It has also been pointed out that ascorbic acid is required for the utilization of several of the essential amino acids.[11] This accentuates the urgency for the early incorporation of adequate amounts of ascorbic acid in the diet.

By the time the infant is 2 or 3 weeks of age supplements of vitamins A and D should be included in the diet. Cod liver oil[40] should cause no digestive disorder by this time but there is the danger of lipoid pneumonia from aspiration of the oil at this early age. Consequently, it is probably preferable to supply the infant with 3 or 4 drops of the more concentrated percomorph or halibut liver oils[41] than the 15 to 20 drops of cod liver oil. Some prefer to use dispersions of the vitamin in preparations which are readily miscible with the milk.[42] The maximum needs of the young infant seem to be 350 to 400 units a day and there is evidence to indicate that the continued use of several times the maximum need causes a decrease in the appetite and a consequent decrease in calcium retention and rate of growth.

The first solid food usually included in the baby's diet is cereal. Probably the only real value of a farina preparation is that it gradually begins to introduce the infant to solid foods but, if the cereal preparation is carefully selected and a whole grain cereal or a fortified proprietary cereal[43] is selected, the need to supplement the diet with iron and factors of the vitamin B complex will probably be greatly reduced. The initial cereal feeding should be 1 teaspoonful before a milk feeding. It should be pointed out that the food should be placed well back on the tongue for the musculature of the mouth is not entirely coordinated for swallowing at this early age and if placed near the anterior portion of the mouth the food will automatically be pushed out. Thus the mother may get the impression that her child does not like cereal. Usually the infant will be taking 2 or 3 tablespoonfuls of cereal within 2 or 3 weeks.

Some pediatricians prefer to withhold cereals until the capacity of the infant has increased and to provide the needed iron and vitamin B complex supplements with egg yolk, vegetables and fruits. Providing the infant with these foods instead of cereal accustoms the child to a variety of flavors and textures of foods, an aid to forming good feeding habits. Egg yolk, hard or soft boiled, is frequently given at 3 to 4 months of age or even earlier. The white of the egg should be avoided until the infant is 8 to 10 months of age for it is more frequently the source of allergenic reactions. Some authorities disagree with the latter and give egg white at 3 to 4 months of age.

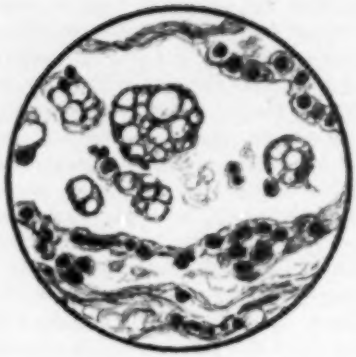
Vegetables and fruits are good sources of iron, minerals and factors of the vitamin B complex. They are usually added to the artificial diet between 3 and 6 months of age. Initially they are puréed[44] but they should be given in the chopped form by the 8th to 10th month since excessive prolongation of the introduction of more firm foods is apt to make that introduction more difficult. Carrots and tomatoes are recommended as being especially good vegetables but others are used as well. Among the fruits raw, overripe banana may be given crushed to the 3 or 4 month old infant because of its ease of digestibility. Prune juice has value in treating constipation. Applesauce, stewed apricots, pears and peaches are

desirable additions to the diet.

Meats are commercially available in sieved or coarser forms for infant feeding[45] and in combination with vegetables. They are frequently given when the infant is 8 to 10 months of age or earlier if desired. Initially probably the two best meats to give are lean beef and liver. Later lamb, fowl, and fish may be added. Meat protein is not an important addition during the earlier months of life to the milk diet but meats are good sources of iron and vitamins.

Starchy foods are usually omitted from the diet until the infant is nearing the one year mark and then baked potato, rice and bread are often supplied. Zwieback, toast or graham crackers may be given a little earlier to encourage chewing. Desserts are usually postponed until the second year of life although custards and junket are frequently given for their egg and milk content and jello for its protein content as early as 3 months of age. Soups are overrated because they are so bulky in proportion to the food value they possess and, consequently, more essential food items may be displaced.

Practical Hints In conclusion a few practical hints regarding the feeding of infants will be reviewed. It is to be expected that there will on occasion be a marked variation in the amount of food taken by the infant from meal to meal. This is a normal variation which adults normally experience. New foods should be started singly and they should be well established, gradually increasing from small initial amounts, before another is started. Nothing is to be gained by forcing any particular food. Later feeding problems are often begun at this point. Usually an infant will develop the habit of making a satisfactory choice of foods if an attractive variety is offered under pleasant circumstances. During an acute illness a temporary anorexia should be expected and the baby should be permitted to set his own eating pattern. When



Lipoid Pneumonia—microscopic section showing alveolus filled with phagocytic cells containing oil droplets.

the formula apparently "does not agree" be certain that the baby is receiving enough to eat, that there are no technical errors in the feeding, and that there is no physical disturbance of the infant. In most cases it is less likely to be the formula but there are those cases wherein gastro-intestinal allergies do occur.

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New Test for Stomach Cancer Devised by New York Doctors

An ingenious balloon test for cancer of the stomach has been devised by a group of doctors from Cornell University Medical College and New York Hospital, New York.

The process is reported in a recent issue of the *Journal of the American Medical Association* by Drs. Frederick G. Panico, George N. Papanicolaou and William A. Cooper.

A rubber balloon covered with short pieces of braided silk and attached to the end of a tube is swallowed into the patient's stomach and then inflated, the doctors say. Cells from the stomach lining cling to this balloon "brush." The apparatus is deflated and withdrawn and the cells are removed by washing in a special solution.

The cells are then examined by means of the smear test, developed by Dr. Papanicolaou and in wide use for detecting cancer of the cervix in women. Describing the test, Dr. Papanicolaou says:

"Cells at the surface of the growth tend to be dislodged. A technique for collecting the cellular debris, smearing it upon glass slides, and staining it has been perfected so that the various components may be studied. Interpretation of the smear requires the services of a careful and discriminating cytologist who has had experience in this field."

The balloon test was used in collecting cellular material from the stomachs of 33 patients in whom the diagnosis of a disease was confirmed by surgery, the doctors report. Of this group of 33, 17 had malignant disease and 16 had diseases other than cancer.

Among the 17 patients with cancer, balloon wash smears revealed no malignant cells in two cases, suspicious cells in one case and malignant cells in 14 cases.

Among the 16 patients with conditions other than cancer, smears were negative for malignant cells in 14. Two specimens were read falsely as suggestive of malignancy.

Cardiac Murmurs and Their Interpretation

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With the general public becoming increasingly more health conscious and actively interested in cardiac conditions through participation in local and national heart associations, the time is rapidly approaching when the patient will not with docility accept the physician's statement that he has a heart murmur and be willing to let it go at that. The present-day patient is likely to inquire as to what a murmur is and what causes it. What does it signify? Will he always have it? Does it mean that he has a bad heart and if so what kind of heart disease does he have and what can be done about it? Any one or more of these are likely to be embarrassing questions to explain satisfactorily if the physician does not occasionally refresh his knowledge on murmurs; knowledge we all have possessed at one time or another, but which may have become vague from lack of application to each case as we go along. It is easy to record a murmur as either systolic or diastolic without stopping to analyze its true meaning and significance.

Since the cardiac valves are the principal physical components involved in the production of heart murmurs, a brief review of their anatomy is in order before proceeding to a discusion of the murmurs which arise from them.

The pulmonary valve has three cusps or segments and is referred to as a semilunar valve. It lies opposite the third left chondrosternal junction. The aortic valve also has three semilunar cusps, the orifice is circular and anatomically it lies behind the left (murmurs audible on right) half of the sternum opposite the third costal cartilage. The tricuspid valve has three cusps and is interposed between the right auricle and the right ventricle. This valve is situated near the anterior wall of the chest and lies obliquely behind the right half of the sternum at the level of the fourth and fifth costal cartilages. The mitral valve has only two cusps and is interposed between the left auricle and the left ventricle. It lies behind the left half of the sternum opposite the fourth rib. The valve cusps consist of a fold of endocardium reinforced with a little fibrous tissue. The bases of the cusps are continuous with one another and attached to a fibrous ring. The apices of the cusps are thinner than the central portions and are notched and irregular. The ventricular surfaces of the mitral and tricuspid valves are rough and are attached to fine cords (the chordae tendineae) which are in turn fastened to muscle bundles in the ventricles (the musculi papillares).

Although the first and second sounds of the heart are heard all over the cardiac area, the sounds of the individual valves are not heard best over their anatomical location, but where the chamber in which

the valve lies approaches nearest the surface of the chest wall. Consequently the pulmonary sound is best heard over the second left intercostal space. The aortic over the second right costal cartilage, the tricuspid over the lower part of the sternum and the mitral at the apex.

A murmur is an abnormal sound arising in one or more of the chambers of the heart. Normal blood passing through normal chambers and normal valves produces no sound other than the first and second sounds normally heard. However, when blood is forced through a narrowed or stenosed aperture, or when it regurgitates through an incompetent valve, vibrations are produced by the irregularity in the current which are transmitted through the chest wall as audible murmurs or palpable thrills. The murmur is usually transmitted in the direction of the flow of current producing the murmur. The viscosity of the blood may also be a factor in the production of murmurs. The less the viscosity, the greater the ease with which vibrations may be set in motion in the blood stream. This, no doubt, often explains the murmurs detected in anemia which often disappear with correction of the blood state. Another factor involved is the intracardiac pressure. Thus murmurs which may have been distinct often disappear with the onset of decompensation which is associated with a fall in intracardiac pressure.

Murmurs are classified as to time, quality and intensity. Consequently we speak of a murmur as systolic, presystolic, late systolic, diastolic, prediastolic, late diastolic, etc. However, for all practical purposes the classification of systolic or diastolic is sufficient. In timing a murmur the examiner's finger should be placed on the neck over the carotid artery. A murmur that accompanies the rise in the pulse is systolic, while one that accompanies the fall in pulse is diastolic. The quality may be soft, loud, blowing or musical. It should also be noted in studying a murmur whether it is followed by the normal valvular sound, or whether it replaces the normal sound. Murmurs which replace the normal sound are of more serious import. The intensity of the murmur may occasionally afford some information as to the myocardial efficiency. Thus, while on first consideration a loud murmur may be thought to be more serious than a soft one, in reality the converse may be true. The loud murmur may be accompanied by cardiac hypertrophy, nature's method of attempting to increase the blood volume output, whereas a soft murmur may signify dilatation, thinning out of the myocardium and loss of efficiency. This should especially be borne in mind when a murmur that has been loud becomes soft or faint under continued observation. Diastolic murmurs nearly always denote organic valvular heart disease, and the rumbling diastolic murmur is evidence of stenosis of the mitral or tricuspid valves. Systolic murmurs, on the other hand, are more frequently functional in character. Especially is this true of systolic murmurs heard in the second left interspace over the pulmonary valve. Likewise, many soft blowing systolic mumurs heard at the apex and diagnosed as heart disease are of no particular significance, other than denoting a stretching of the mitral ring, which may accompany hypertension or be secondary to an infectious process. Systolic murmurs at the apex should not be diagnosed as mitral insufficiency unless there is a history of rheumatic infection or other signs of cardiac insufficiency are present. This is also true at the tricuspid area. Functional murmurs will sometimes disappear following injection of atropine and be accentuated following the injection of adrenalin. Organic murmurs never disappear following the injection of atropine.

In mitral stenosis the murmur is a rumbling, low pitched, vibratory diastolic murmur and may be missed unless the patient is examined lying on the left side at the edge of the examining table. Im-

portant to note in association with this murmur is the loud mitral first sound, the decrease in intensity and often difficult to hear mitral and aortic second sounds, and the loud pulmonary second sound. The murmur of mitral stenosis is not transmitted. It is sharply localized to the apex. It may or may not be accompanied by a thrill. Exercise exaggerates the murmur.

Pure organic mitral insufficiency or regurgitation is uncommon and the diagnosis should not be made in the absence of a rheumatic history or atheromatous disease. When present it is characterized by a long loud systolic murmur at the apex, transmitted to the axilla and around to the left scapula. True mitral insufficiency may be associated with mitral stenosis and then there will be a double murmur, one systolic and the other diastolic.

Tricuspid insufficiency is rare. When it does exist it is characterized by a loud systolic murmur over the fourth interspace in the left parasternal line, and is transmitted to the right and downward to the xiphoid. A pulsating liver often accompanies this lesion.

Tricuspid stenosis is also rare. When it exists it is rheumatic in origin. The murmur is a rumbling diastolic murmur close to the left border of the sternum in the fourth interspace.

Pulmonary regurgitation is exceedingly rare. When present it gives rise to a soft blowing diastolic murmur transmitted downward along the left border of the sternum.

Pulmonary stenosis is also extremely uncomon. When it exists a systolic murmur is produced which is transmitted toward the left shoulder. This is the area where so many functional murmurs are found, especially in childhood.

Aortic regurgitation is one of the most common heart lesions. The murmur is diastolic, occurring in the second right interspace and transmitted downward to the left and toward the apex.

Aortic stenosis is rather common and is denoted by a loud systolic murmur which is sometimes audible without a stethoscope. It arises in the second right interspace and is transmitted upward into the neck and often over the entire precordium.

The cardiorespiratory murmur is probably produced by pressure of the heart in systole forcing air from a portion of the lung with which it is in contact, thus simulating a murmur. Holding the breath will often cause the disappearance of this murmur. It is systolic and is heard in the mitral area.

Congenital heart murmurs are loud, harsh, heard at the base or all over the precordium and are likely to be continuous or machine-like.

Arteriovenous aneurysm may give rise to a similar type of murmur.

The above salient factors if kept in mind and automatically made a part of every examination of the heart will greatly facilitate the classification of murmurs into organic and functional and make for a clearer concept of the true meaning of the murmur detected.

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Arthritis and Rheumatic Fever Seen as One Disease Process

Indirect evidence is strong that rheumatoid arthritis and rheumatic fever are different manifestations of one fundamental disease process, according to two doctors of the University of Texas Hospital, Galveston.

Weather and Health

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The words "paludism" and "miasma" may serve to remind us of the time when we (at least those of us who lived along the Atlantic seaboard) avoided building our homes in the valleys and near swamps; for we thought that the air in these lowlands brought on fever and ague.

We are remimded of the same theory when we read in Seale Harris' biography of the Woman's Surgeon, J. Marion Sims, that the sickness resulting from his residence in Montgomery, Alabama, compelled Dr. Sims to move to New York City where he felt better because, as he believed, the drinking water was softer and healthier. This was between 1845 and 1855.

The same theory crops up when we learn how the French and other European peoples slept in tightly closed rooms or cubicles for fear of the night air.

Not until Pasteur proved in the 1870's that there was no such thing as spontaneous generation; and Robert Koch proved in 1883 that consumption was due to tubercle bacilli; and Major Ross at the turn of the century proved that swamp fever was due to malaria, did we realize that it was not the chemical characteristics of the air, but the living organisms carried by air and insects and food that cause many if not most of our sicknesses.

But even after such sources of infection had been eliminated by antisepsis and quarantine, we found in the second and third decades of the twentieth century that there was still something in the influence of weather—climate—heat—cold—in short, of our environment, that led to ill health and even death.

As a result there was established at Yale in 1933 the John B. Pierce Laboratory for the purpose of promoting "research, educational, technical, or scientific work in the general field of heating, ventilation and sanitation for the increase of knowledge to the end that the general hygiene and comfort of human beings and their habitations may be advanced." The latest volume from this laboratory written by Professors Winslow and Herrington has been the stimulus for this discussion of weather and health.[1]

We would call attention to the contrast in the approach made at this laboratory to the problem with that of our forefathers even as late as the eighteenth century. To emphasize this point I would like to rehearse some of the teachings of the magi or wise men of old as to the causation of disease.

In the beginning the teachers of philosophy and medicine—as far as our records go—believed that disease was caused by external conditions or forces outside the body such as disturbance of the elements

(air—water—fire—soil). Then the Greeks and Romans added two others, first, individual predisposition, and second contagion. In Asia the Buddhists went further and made a more elaborate list:

(1) disturbances of the elements;
(2) immoderate food or drink;
(3) wrong methods of meditation;
(4) sinful desires;
(5) evil influences;
(6) devils and demons.

Mediaeval theorists developed another list which included the four elements and also the humors of the body; such as yellow bile, black bile, phlegm, and blood. They wrote also of humors in another sense, that they were hot—cold—dry—or moist.

To appreciate this we should take at least a glimpse at some of the statements found in the writing of Hippocrates and Galen, whose teachings formed the basis of western thought on health and disease for at least a millenium.

(These extracts are taken from Winslow's *Conquest of Epidemic Disease.*)

The Greeks thought of sickness as the result of environment, individual predisposition and contagion. That is, after they had evolved from the stage where their world was personalized and everything about them represented demons and gods. Thus Hippocrates wrote: "Hot winds cause poor appetite, derangement of the digestive organs, flabby physique; in women they lead to fluxes and barrenness: in children, to asthma, epilepsy, and convulsions; in men to dysentery, diarrhea, and ague; with pleurisy and pneumonia only occasionally. Cold winds make men sinewy, spare, and costive; they conduce to pleurisy and acute diseases.—Cold and frosty waters cause colds and sore throats. Rain water is ideal and so is water from high places and earthy hills, while springs from rocks are dangerous, and melted snow and ice is very bad. . . . Marshy and stagnant water is associated with large stiff spleens, and hard, thin, hot stomachs, while the shoulders, collar bones and faces are emaciated. The fact is that their flesh dissolves to feed the spleen. . . . With marshy waters in the summer there are epidemics of dysentery, diarrhea, and long quartan fever."

As to seasons, we learn from him that a rainy spring will be followed by fever and dysenteries in summer, and that the solstices, and equinoxes, the time of rising of the dog star and Arcturus, and the time of setting of the Pleiades, are specifically dangerous periods.

Galen (A. D. 129-198 or 131-201), born in Pergamos and therefore a Greek, and living most of his life in Rome and thereby Roman, put the matter of weather rather strongly: "In a pestilential condition of the atmosphere, the air taken in in breathing is the principal cause of fevers (VII. 289) . . . . The initial cause of putridity of the air is either a multitude of dead bodies which have not been burned, as happens commonly in war; or an exhalation from swamps or stagnant waters in the summer time; and sometimes excessive heat of the surrounding air is the starting point, as, for example, in the pestilence which invaded Athens . . . But remember that no external cause is efficient without a predisposition of the body itself. Otherwise external causes which affect one would affect all; all would fall ill at the rising of the dog star and all would perish of the plague. But, as has been said, the largest share in the origin of diseases is the predisposition of the one who shall fall a victim to it. Let us assume, for example, that the circumambient air carries certain seeds of plague; that of the bodies that breathe it some are already filled with corruption and are ready of themselves to suffer putrefaction; others are free from corruption and pure. Let us assume, too, that in the former there is present already general obstruction of the pores, the so-called plethora, an inactive life given over to drinking, high living, and sexual in-

dulgence; that in the others which are free from corruption there is wholesome transpiration through the pores that are neither obstructed or constricted, that they take moderate exercise and lead a temperate life; supposing all this, which of the two types will probably be affected by the breathing of air which is favorable to putrefaction?" (VII. 291-292).

This was the general belief up to the time of Pasteur (i.e., 1860-1880), that is, from the second to the nineteenth century of our era, namely, that the three factors in disease were atmospheric influence, individual predisposition, and contagion.

The last stand, as Winslow puts it, for the Galenic theory was made by Pettenkofer, who was born at Lichtenheim in 1818 but brought up in Munich where he became professor of hygiene and was active even to my day. He died in 1901, old and lonely, of suicide. His was the celebrated "ground water" theory, that the condition of the soil—of the terrain—and the level of the water determine the onset of epidemic diseases. This was based on his study of cholera—in Altoona—in India —in Gibraltar—in Malta and in Munich. And though he accepted Koch's demonstration in 1883 of the comma bacillus, he believed to the end that cholera is water borne only incidentally.

When the carriers of disease were found —as in malaria — yellow fever — and typhus, much of our interest in night air, swamp air and heat and cold disappeared and we undervalued the effects of environment until it came about that even with perfect quarantine and antisepsis we still suffered from diseases due apparently to environmental conditions.

What these conditions are and how they influence our health has been the study carried on at the John B. Pierce Laboratory at Yale.

The essential difference between scientific medicine and metaphysics (by whatever name called) is that modern science is based not only on observation and ratiocination, but also on the proving of the hypotheses by experiment. Walter Cannon explains this well in his autobiographical *The Way of an Experimenter.* Robert Koch defined the method when he laid down his four postulates in studying the causation of consumption (tuberculosis). These were: (1) find the organism; (2) cultivate the organism in pure form; (3) inject the organism into an animal and secure a repetition of the symptoms; (4) find the organism in the new lesion.

Ventilation Winslow and Herrington found that to be comfortable we humans need:

(1) a skin temperature of 33 degrees C. (91.5 F.);
(2) a minimal heat change in the bodily tissues; and
(3) a minimal evaporation rate.

So in winter clothing as worn in northern United States we have to have: at *complete rest,* an operative temperature of 78° F. and an air temperature (assuming that the walls are cold) of 79° to 80° F.; with *moderate activity,* 74° F.; and with *considerable activity* (as in typewriting) 68° F. operative and an air temperature of 69° to 70° F. *In summer clothing* (at New Haven), in an air temperature of 70° F. with 100% relative humidity, or 73° F. with 60% relative humidity, we can be reasonably comfortable.

The air change of 10 cubic feet per minute per person with normal leakage through building structure should control odors.

The absolute humidity of the air rather than the relative humidity is the factor that determines the comfort of the nasal mucosa.

The giving off of heat by the body determines our feeling of well being rather than the absence of effluvia from animal bodies; that is, the thermal properties of our atmospheric environment (temperature, moisture, air movement) are of far greater significance for our well being

than the chemical properties of the air.

The operative temperature represents the mean effect of the temperature of the air of the room and of its walls. Under normal conditions walls and air exert approximately equal effects; but if a room has three cold exterior walls a higher air temperature will be necessary for comfort than in the case of a room with a single exterior wall exposed to the sun but not to the prevailing winds.

Such findings ought to help us in our advice to school authorities about the construction and arrangement of school buildings, and in setting up standards of hospital construction, to say nothing of the size, arrangement and heating facilities of homes and apartments. For it contrasts sharply with traditions and some present-day conventions.

Their statement of their findings is succinct enough for quotation (p. 251).

(1) Extreme heat or cold lead directly to fatal results, and even such temperature variations as occur in the United States may increase general mortality rates to double their normal values.

(2) Industrial production and intellectual and social achievements are highest in climates and at seasons where favorable conditions prevail. The general level of such achievement appears to be definitely favored by the stimulus of moderate (but not extreme) variations toward the colder side of the optimum range.

(3) The human body displays regular annual rhythms of physiological activity as displayed by variations in blood chemistry, in endocrine activity, and in resistance to poison and disease, which are little understood but which are perhaps related to the winter peak of mortality.

(4) Seasonal and climatic variations in morbidity from the communicable diseases are particularly significant, and always tend to show an increase in intestinal infections under hot conditions, and an increase in respiratory infections under cold conditions. This correlation can be explained only in part by influences affecting the facility with which the infectious agents are disseminated through a community. It is so close and so general that it can be understood only on the assumption that direct physiological responses to temperature govern the power of the nasal and oral mucosa and the intestinal mucosa, respectively, to resist invasion. This conclusion is clinched by the fact that in diphtheria and scarlet fever we have clear evidence that in the tropics distribution of the germs (as demonstrated by acquired immunity) is as general as in northern climates, while actual clinical manifestations are relatively rare. The decreased blood supply of the nasal and oral mucosa under cold conditions, and the decreased blood supply of the intestinal mucosa under warm conditions, would seem to be an important factor influencing such variations in resistance to invasion.

Other interesting points made by Winslow and Herrington[1] are the following:

The authors do not agree with Mills that the colder climates overstimulate the endocrine glands and produce such diseases as exophthalmic goitre and diabetes. They find that the correlation of death and sickness rates is with socio-economic conditions rather than with climatic. With regard to cardiorenal diseases they reach the same conclusions: that except for angina pectoris the correlation is with socio-economic conditions rather than with weather and climate.

They seem to agree with Markham that when the mean temperature of the hottest month of the year exceeds 75°F., the white immigrant and his children may be able to tolerate the changed conditions, but that his grandchildren will show a definite loss of energy and of mental and physical efficiency.

They also approve Brunt's observations that the invention of the hypocaust[2] made it possible for civilization to spread north-

ward, and provided for the great days of Athens (annual mean temperature, 60°F.) and of Rome (annual mean temperature, 60°F.). "With the fall of the Roman Empire," he says, "indoor heating became less common and almost died away, and the next major civilization, the Moslem, was again in the region of the 70°F. isotherm. Later on, in Western Europe, as indoor heating developed and houses once again became waterproof, civilization began to make rapid strides."

Finally, in order to show that the world has not yet reached its goal, let me quote from the World Health Organization report that three-fourths of the world's population are victims of diseases resulting from poor sewage disposal, unsafe water supply, insects, and inadequate protection of milk and other food.

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Use of Radioactive Iodine to Control Spread of Thyroid Cancer

The most dangerous manifestation of cancer, its tendency to spread to parts of the body not directly connected with the malignant lesion, apparently has been controlled in one patient by administration of radioactive iodine.

Treatment of a 14 year old boy with cancer of the thyroid gland and a malignant growth in the lung which had spread from the original lesion is described by four Boston doctors in a recent issue of the *Journal of the American Medical Association*.

(Dr. Walton Van Winkle Jr., Chicago, secretary of the A.M.A. Committee on Research, emphasizes that radioactive iodine is used in the treatment of cancer only for tumors of the thyroid gland and those which have spread from the thyroid gland.)

The thyroid cancer was removed surgically, the doctors—A. Stone Freedberg, Alvin L. Ureles, Mark F. Lesses and Samuel L. Gargill of Harvard Medical School and Beth Israel Hospital—say. The lung cancer disappeared two months after administration of radioactive iodine was begun, and in the subsequent 12 months there has been no evidence of recurrence.

"A striking result was achieved with radioactive iodine in this patient," the doctors point out. "After the first dose of I^{131} there was complete disappearance of the metastatic pulmonary lesion, and on subsequent therapeutic or tracer doses there was no evidence of localization or concentration of I^{131} in the area of the metastasis.

"The first therapeutic dose also resulted in complete destruction of the functioning thyroid tissue in the neck. Destruction of the metastatic lesion concomitantly with the destruction of thyroid tissue in the neck is unusual.

"The adverse effects of I^{131} in this patient were mild and required no specific therapy. At present he is entirely well. There is no evidence of metastatic recurrence in the neck, lungs, long bones, skull or pelvis.

"The exact nature of the metastatic lesion in this patient is not known; the location and size of the lesion precluded biopsy [removal, preparation and examination under a microscope of samples of tissue]. The pathologic report on the surgically removed right lobe of the thyroid gland was papillary adenocarcinoma [a frankly malignant tumor]."

Pregnancy

Following the Extraperitoneal Cesarean Section

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Since the modern versions of the extraperitoneal cesarean section were popularized, mainly through the work of Waters and Norton, there have arisen three schools of thought in regard to the treatment of the potentially or frankly infected woman with a cephalopelvic disproportion. There are those who feel that the newer drugs and antibiotics judiciously used from the onset of labor and/or rupture of membranes will allow all such patients to be delivered by means of the transperitoneal approach. Another group is convinced the frankly infected case should have only cesarean hysterectomy or, if possible, embryotomy. The third group is convinced that extraperitoneal section is the procedure of choice. The records of extraperitoneal sections at Mercy Hospital have been reviewed from January 1, 1943 to June 1, 1949, during which period approximately 15,000 cases have been delivered. In this review, the purpose is not to add fuel to the present conflict of opinions. It was thought that if it were shown that by performing extraperitoneal sections, on infected women with disproportion, and then subsequently delivering these same women of normal healthy children, it would be a formidable argument against cesarean hysterectomy. In women subjected to hysterectomy there will be no more pregnancies; in those in whom embryotomy is performed there is no living child.

In answer to those who advocate chemotherapy, antibiotics, and transperitoneal approach, our service at Mercy is apparently not as strictly supervised as at some hospitals with a purely obstetrical staff and a full quota of residents and interns. Our cases are handled by approximately seventy physicians, the majority of whom are busy general practitioners. There are no interns. From a review of the records, the cases coming to extraperitoneal section have not had the benefit of intensive chemotherapy and antibiotics.

Our review concerns thirty-nine extraperitoneal sections of the Waters or Norton type performed at Mercy Hospital, and two cases performed elsewhere during their first pregnancy. Each of the latter cases was operated on in her first pregnancy by a member of our staff, and each was definitely morbid. These forty-one patients have had, subsequently, eighteen pregnancies. Of the eighteen pregnancies two terminated in early miscarriage, both in the same patient. One patient had two subsequent full term babies and is due again in August. Another patient delivered prematurely at six and one-half months. Another patient had two subsequent pregnancies, the latter delivery being in another hospital so the tubes could be ligated.

Of the thirty-nine extraperitoneal sections, thirteen were definitely morbid with early rupture of membranes and long labor, and elevation of temperature at the

time of operation. The remainder of the cases were potentially infected. Thus, infection or almost certain potential infection were the reasons for extraperitoneal section, except in one case. In this case it was necessary, because of dense peritoneal adhesions from a previous laparotomy, to dissect down to the uterus laterally, and extraperitoneally.

All of these subsequent pregnancies were delivered by low transverse section. In three cases it was noted that there was difficulty in raising the left portion of the bladder flap. This was most marked in the case of a patient who sustained a morbid postoperative course of thirty-three days following her extraperitoneal section. Another case on subsequent section showed a partial rupture of the old uterine scar with membranes bulging through the separation. However, on the whole it may be said that the majority of subsequent sections were not made difficult by scar tissue reaction following the previous extraperitoneal procedure.

From Mercy Hospital, Rockville Centre, N. Y. Read before the Associated Physicians of Long Island at Westbury, N. Y., June 13, 1950.

While no one wishes to uphold the preoperative management of these cases, and perhaps, the number of cases coming to extraperitoneal section can be criticized as being too large, the cases, nevertheless, presented themselves. Could these cases have been managed as well by other methods with no increased danger to the patient? Embryotomy is certainly not as safe to the mother as this procedure. We feel that the extraperitoneal section has displaced the need for embryotomy. Hysterectomy precludes subsequent deliveries, and also has a definite mortality.

Concerning transperitoneal approach in these morbid or potentially infected cases, we feel that the extraperitoneal section was the safest procedure and the one with the fewest complications.

We are of the opinion, from the review of these cases, that by this procedure of extraperitoneal section we can most successfully deliver the poorly managed maternity case with a disproportion. We also feel that only by this method of delivery can such cases reasonably be assured safe subsequent pregnancies and deliveries.

✚

Terramycin Cures 25 Out of 25 Severe Cases of Pneumonia

Of 25 patients with severe cases of pneumonia, 100 per cent were cured when treated with terramycin, according to reports by a group of four doctors at the Columbia-Presbyterian Hospital in New York. The results of this therapy with terramycin, newest discovery among the earth-mold drugs, are detailed in a recent issue of the *Journal of the American Medical Association.*

Authors of the report were Doctors George W. Melcher, Jr., Count D. Gibson, Jr., Harry M. Rose, and Yale Kneeland. Eighteen of the cases were bacterial lobar pneumonia, and seven were virus (primary atypical) pneumonia. The results indicated, according to the doctors, that "terramycin is remarkably effective in the treatment of both types of infection."

There were no complications, and all patients made a rapid and complete recovery. Among the patients with lobar pneumonia, with the exception of one subject, the doctors said there was "a dramatic fall in the temperature within 24 to 36 hours after the first dose of terramycin was given." Temperatures of the virus-pneumonia patients fell within 36 hours after the first dose of terramycin.

The doctors found no serious toxic effects attributable to the terramycin therapy, and in only 9 of the 25 cases did any symptoms of gastrointestinal irritation occur.

Meningitis In A Premature Infant

MARTIN GLYNN, M.D.
Rockville Centre, N. Y.

A white female infant, thirty-two days of age, was transferred from the premature nursery to the pediatric ward because of fever of thirty-six hours' duration.

History This infant weighed four pounds and eight ounces at birth. Delivery followed an induced labor at thirty-eight weeks. The induction was performed for pre-eclampsia.

The infant's condition was poor for the first eighteen days. She vomited frequently and took the bottle poorly. The weight fell to four pounds at two weeks of age. At this time she passed loose yellow stools. After two days, these stools were succeeded by stools consisting solely of white curds, resembling gastric content, following a milk feeding. The baby was extremely distended, moderately dehydrated and slightly febrile at this time. Her feedings were changed from cow's milk to a soybean preparation (Mullsoy) with prompt disappearance of all symptoms. She then thrived for thirteen days, gaining one pound and five ounces.

Present Illness At thirty-one days of age the infant became febrile. The temperature rose gradually over a period of thirty-six hours to 103.6°. Repeated physical examinations during this time revealed only slight but progressive widening of the sagittal sature. There were no symptoms except fever.

Examination, on transfer to the pediatric ward, showed a well developed and nourished infant of five pounds and five ounces. The color, cry and activity were normal. Details of the examination were quite negative except for a sagittal suture 2 or 3 mm. in width.

Course and Laboratory Data Lumbar puncture produced 5 cc. of cloudy fluid—a large quantity for an infant of this size. Because of the relative frequency of gram-negative bacilli as a cause of meningitis at this age, streptomycin was immediately administered intrathecally without awaiting laboratory report on the fluid. The fluid revealed gram-negative bacilli on smear, as expected, with the white cells numbering 2,000. The organisms were later cultured and found to be colon bacilli. Following the lumbar puncture streptomycin was prescribed, intramuscularly, 12 mg. every 3 hours and sodium sulfadiazine was given hypodermically in a dosage of 100 mg. every eight hours. Thirty-six hours later chloromycetin was ordered, orally, 40 mg. every six hours.

The white blood count, at this time, was 17,000 with 78 per cent polymorphonuclear leukocytes. The hemoglobin was 10 grams/100 cc. Red cells numbered four million. Urinalysis, on two occasions, was negative.

The response to therapy was marked by a gradual fall of temperature from 103.6° to normal in forty-eight hours. The infant's general appearance was good, with one exception mentioned below. No convulsions, cyanosis nor classical meningeal signs ever appeared.

A stubborn diarrhea occurred. To secure a fat-free formula, Mullsoy was discontinued and skimmed cow's milk given. The white curdy stools, described above, immediately recurred and again ceased on resuming Mullsoy.

The spinal fluid findings mirrored the response to therapy as follows:

The white cell count fell from 2,000 to 230 on the third day after beginning treatment and thereafter fell slowly to 20 cells on the twelfth day and 4 cells on the eighteenth day.

The smear for organisms became negative on the first day and the culture became negative on the second day.

The spinal fluid sugar, reported "negative" on the initial test (the rough "qualitative" test) was 30 mg. per 100 cc. on the third day and ranged from 35 mg. to 42 mg. thereafter.

The intrathecal streptomycin was increased from 10 mg. to 25 mg. per dose on the third injection. Daily injections were given, in this dosage, for four days. The dose was then decreased to 12.5 mg. every 2 days for 2 doses and then discontinued. Intramuscular streptomycin was used for 10 days, in a dosage of 12 mg. every 3 hours.

Sulfadiazine was given parenterally for eleven days and followed by sulfadiazine orally for the next seven days.

Chloromycetin was given for eighteen days.

Transfusions and sundry parenteral fluids and vitamins were necessary.

Comment Since this baby is apparently quite normal, eight months after the above illness, it would appear that the relatively early diagnosis and persistent therapy prevented neurologic sequelæ. The lack of meningeal signs is the rule in young infants, early in the course of meningitis, but the absence of cyanosis and convulsions in a premature infant with this infection is uncommon. This infection is often associated with a color bacillus pyuria.[1] This patient is an exception.

On only one day (the sixteenth) was the patient seriously ill in appearance, becoming very distended and "toxic." No explanation was found for this change.

From Mercy Hospital.

Read before the Associated Physicians of Long Island at Westbury, N. Y., on June 13, 1950.

References

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Cortone on Sale Nov. 1

Merck & Co., Inc., drug manufacturers, announced recently that Cortone, the brand name for cortisone—a harmone product important in the treatment of rheumatoid arthritis—would be made generally available on or about Nov. 1.

The announcement said also that the price of the product would be reduced to $35 a gram, compared with the previous suggested list price to physicians of $50 a gram. An obstacle to the use of cortisone, or Cortone, has been its high price, which had been five times its present level a little more than a year ago.

Before the announcement, Cortone had been available on a limited basis only, with distribution restricted to hospitals.

From the New York Times, Friday, October 13, 1950.

"Physician, Heal Thyself"

A Physician's Personal Experience with Heart Disease

P. CHARLES GREEN, M.D.
Philadelphia, Pa.

I

March 15, 1942 Notes

First comes the test tube, then the guinea pig, then the man, in the study and investigation of disease. Out of the test tube come drugs, serums, vitamins, and various chemical reactions. Out of the guinea pig come the results of the physiological and pathologial changes that occur when the drugs, the serums, and the vitamins go in. Out of the knowledge gained from the results come the chemicals, the serums, and the vitamins that go into the man to change and stop and, if possible, cure the disease process. Here is the first great fundamental fact that must be understood. Disease is not just a name, such as cancer, tuberculosis, pneumonia, heart disease. Disease is a process of decay, and all decays tend toward death unless checked.

More physicians die of heart disease than any other group of people. Fewer laboring men, relatively, die of heart disease. If you want proof of this statement just look up insurance, city, State, and governmental death reports. In the last year twelve physicians of my acquaintance died. Seven of the deaths were from heart disease. Only two of the twelve had passed three-score years and ten. Why do so many doctors die of heart disease? If I could answer that question I could tell you why all people die prematurely.

There is a reason why all people die prematurely, or otherwise. It is want of breath. Everyone knows that. What everyone does not know is why the dying person labors for his breath. It is because the lungs are the bellows and reservoirs of life. You can live, for a time, without anything else in the world but you cannot live without air. The laboring man labors for air all his life. As a result of his physical exertions his lungs are expanded and the muscles of respiration are developed to three, four, even ten times the capacity of the sedentary worker. Doctors are not sedentary workers but many of them spend a large part of their time in operating rooms, offices, and the rooms of the sick. One thing doctors also do—they keep a record of their work. The work of the doctor deals with life and death. Therein is the reason why there are more deaths from heart disease of doctors as a group in the mortality records. They make and report the records. It is also true that heart disease is now the leading cause of death of all people however grouped.

What I am going to tell is why I did not die following a major attack of coronary thrombosis in February, 1930, and why I did not die in two other attacks in July and November, 1937; also why repeated attacks of angina pectoris are now under control. What I cannot tell

is whether I shall die before I finish writing this paper, or if I will ever waken from my sleep tonight.

I did not die in 1930 because of two factors—first, a heart that possessed an unusual collateral circulation; second, an attending physician who knew. When the main path is blocked for any reason, a collateral circulation is established with the blood then flowing through a very fine bed of capillaries around the obstruction and joining the larger vessels beyond the obstruction. When I was studying medicine in the early nineties and for a long time after, all doctors believed that coronary arteries were terminal arteries, without a collateral circulation. They are not, and never were. The heart, despite popular belief, is the strongest disease-resisting organ in the entire body. The heart is never affected with cancer or tuberculosis.

This clinical and personal history has been set down to show where my guinea pig study comes in. Following my second and third coronary attacks, the one symptom that was most intractable and almost impossible to control was the chest pain. I could not walk ten feet at times without having to stop and wait until the clutching and pressing chest pains stopped. Doctors call the condition "effort angina," but I knew that at times the pain came on without apparent physical effort. Emotional stress, eye, ear, or nerve shock would cause either the pain or the fear-clutching "nose-dive" symptom.

The "nose-dive" symptom is the most terrifying and ego-deflating one in human experience. The effect is as if one were in an elevator twenty stories up and suddenly the elevator shot down to the ground floor and left everyone in the elevator scared to death and with their hearts in their mouths. Because of the greater height a nose-dive by a plane would have a similar, but greater, effect but not to the pilot if he had been conditioned against it. If the pilot were not so conditioned, there would be no dive bombers.

Finally when the condition became almost unbearable, my physician gave me a new combination drug and the relief obtained was immediate and complete. The strange part of the combination was that I had apparently taken all of the ingredients before but never in this particular combination. There was also another and, as I found out, more important difference. One of the ingredients is what is known as a purine derivative. It had not been used, while others of this group had been. There was also another important difference; a second ingredient, the digestive ferment, was of special manufacture. Later a third element, which I will call "X", entered into the picture. This last element was entirely apart from the combination and was one that I had taken in small amounts throughout the preceding ten years.

As I had completely retired from practice, I had plenty of time to think. Thought must come before test tubes or guinea pigs can be of the slightest help to man. With thought came the question, which of the three was the most important one? The answer, after tests, was the purine derivative, but why this particular derivative and not others of the same group? I then began my study by taking this one drug in the same dosage but the drug was made by different manufacturers. The first difference noted was that the one and a half grain dosage of the drug, made in Germany, seemed to produce quicker and better results than the same dosage made by any one of the four American manufacturers. The drug in question is really made of two parts, being a double salt. In the American product the percentage is 80% and 20%; in the German product the percentage is 78% and 22%. The drug can be split into its component parts by "carbonic acid." Any physician will recognize the drug from this description (see

part II of this paper). The drug is not new, and when first used in medicine in 1920 was tried out in an entirely different condition.

In all the investigations previous to my use of the drug the second part of the drug was supposed to be completely inert physiologically and have nothing to do with the results obtained. This second part is not on the market as a separate drug and it was necessary for me to secure it from one of the American concerns who manufacture it. I then began a series of guinea pig tests on myself. The test walk was on a measured course of half a mile over a slight hill. I could tell at what point in the walk the reaction would come, either positive or negative, and subject to weather conditions. I found that three grains of the American product were better than one and a half grains of the German product. I also learned that the second part of the drug was completely ineffective when taken alone, except when added to activated water. I found that the whole drug was most effective if taken in cold water and best of all if taken with activated "X" liquid. "X" is nothing more or less than an ounce of good whiskey. There is a big catch at this point. The whiskey is really effective if it is activated, and there is no activated whiskey on the market at present. There is, however, activated carbon, which, combined with activated water, forms a most efficient combination. Activated water is simply carbonated or charged water. All foods except alcohol have to undergo change before the body can use them. Alcohol has food and caloric value but of course is absolutely devoid of vitamins.

Before an individual can constitute himself a human guinea pig he must first ask himself the question—have I the required knowledge to evaluate the effects that are produced when I take drugs? One does not have to be a physician to do this but one certainly does have to have the power to separate his emotional and physical reactions. This is by no means easy and the test comes when the attempt is made to set down all the reactions on paper.

It should also be known that it is illegal for a distiller to make any therapeutic claims for his whiskey. This is, of course, as it should be, as only doctors are in a position and have the knowledge to prescribe alcohol in any form and in any amount. A surprisingly small amount of alcohol is required for a remedial effect. Doctors know that laboratory tests of blood and spinal fluid will show alcohol concentration. Only 1/40th of 1% is required to secure direct absorption into the blood and derive a physiological effect. Alcohol is the only drug that is absorbed directly from the stomach and remains completely unchanged in the blood. Concentration of alcohol in the blood over 1/10 of 1% and alcohol becomes a narcotic.

Here are three most important conclusions of my personal guinea pig study —first, a combination of a purine derivative with a special digestive ferment will completely and absolutely relieve and control "effort angina" if—and again if—a proper diet and rest periods are observed and the individual keeps within his limitations of effort.

Second, the best way that I have found to relieve and control an anginal attack when the first tremors of the chest pain or "nose dive" is felt is to stand stock-still or sit tight. If the pain or the "nose dive" increases I am absolutely certain that the best remedy to take is one ounce of whiskey, if possible in activated water.

The methods now extensively used in combatting anginal attacks with one of the various nitrite preparations I believe to be highly dangerous. The nitrite causes an immediate fall of blood pressure and an anginal attack never does unless it is followed by coronary thrombosis. To cause the blood pressure to fall lower in an individual who already has a low or even

normal blood pressure opens the door to coronary thrombosis or heart block. I will go further and say that the excessive use of the nitrites are responsible for more deaths than angina pectoris. For an individual to carry around with him a box of nitroglycerin tablets and take them at will is inadvisable. To take nitroglycerin is like using a twenty-ton mechanical sledge hammer to crack an egg. It can be done but if the control slips where is the egg?

Third, I am convinced from my own experience that if a person suffering from any disease or even only symptoms would write down each day not only how he feels but also what he does and, more important, what he eats and drinks, he would have a graphic picture of his condition to present to his doctor and, in addition, he would be training himself in intelligent observation and deduction.

There is a large section of our people who are health-conscious and the intelligent observation of one human guinea pig is worth thousands of real ones. Of course the real guinea pig must come first, but we in the profession and in the scientific world have been woefully lacking in securing the co-operation of the human species. Doctors individually and in groups are doing just this. Why not you?

II

AFTERTHOUGHTS

(8 years after, and 20 years after the first coronary)

August 15, 1950 notes

First, I want to make very clear that no secret formula was involved. I felt, and still feel, that any physician would recognize that the chief drug referred to was the American aminophyllin and the German metaphylline.* That the enzyme was any good pancreatic extract, combined when symptoms required it, with phenobarbital. That was the combination that did the trick for me. I believe this combination to be the best general prescription for heart distress.

Second, I now feel that I greatly overemphasized the importance of whiskey in the relief of the acute anginal distress. I feel that it is still of some value in acute attacks, and always to be preferred to nitroglycerin. I now feel a better way to use alcohol is the method we used in the Nineties, Hoffmann's Anodyne, spiritus Aetheris Compositus, N.F., and the sweet spirit of nitre, Spiritus Aethylis Nitritis, N.F., restricting the latter to hypertensive cases.

Third, I feel more strongly than ever the danger in the routine use of nitroglycerin to relieve an acute anginal attack.

My last attack of coronary thrombosis was brought on by the excessive use of the "tincture of glonoin" (nitroglycerin). No one could deny that the 1/100 of a grain of nitroglycerin will relieve the average attack of angina, but the relief is fleeting, and if this dose has to be repeated six to ten times a day the damage that is sure to result is too great a price to pay. In the last decade physicians have learned that 1/200 of a grain of nitroglycerin is fully as effective and saves half the shock.

Fourth, all the drugs in the pharmacopeia will be useless unless the patient learns to control both his physical and mental exertions, and keeps within the limit of his capacity for effort. First, and most important, comes food. A light breakfast, a light lunch, and one full meal with rest periods after each meal. No smoking, particularly cigarettes. The cardinal principle for the cardiac to follow is that if anything tires him, stop. If while eating distress comes, stop. At all times and always stop and rest.

The question of shock and lowered blood pressure is of vital importance, so much so that none of the nitrate preparations (nitrite-releasing) should be prescribed when low pressure exists. It may

* Brand of aminophylline no longer marketed.

even be dangerous to give the nitrates when normal blood pressure is present.

A comprehensive study and reaction time of the nitrates will be found in Goodman and Gilman's "The Pharmacological Basis of Therapeutics," MacMillan and Company, 1941, page 552. The table lists the characteristics of vasodepressor response on hypertensive patients receiving full doses of certain preparations which release the nitrite ion in the body. The table tells when the fall begins, the extent of the fall, and the recovery time.

In doing research you must first know what you are researching for. In the present instance we have a well-defined disease of the coronary arteries of the heart known as coronary thrombosis, and the disease is clearly found at autopsy. In the second instance you have a condition known as angina pectoris, which is not a disease, of course, at all, but a collection of symptoms known as a syndrome and never found at autopsy. Per se, it leaves no mark or scar on the heart or any organ. No pathologist has ever found the slightest sign of it at post-mortem. What, then, is angina?

At the present time the medical profession is widely discussing this question. Many hold it to be a two-part question: that there are two types of angina pectoris; namely, a true type and a false type. To distinguish between the two types a test using the chemical pitressin is being tried out. The catch of this test is that it requires an electrocardiogram to evaluate it.

Patients suffering from effort angina find the attacks come so frequently and from such slight causes that they should have at all times a remedy to control them. If the constant use of nitroglycerin is out what drug will act as quickly and far more safely? I have found the answer in a five-grain tablet of pure acetylsalicylic acid, dissolved on the tongue.

The use of aspirin by the public has become so widespread that most physicians have eliminated it from consideration of drugs to be used. Another factor that has stopped physicians from the use of aspirin as an analgesic is the many inferior preparations that are on the market. I recently saw an ad of a cut-rate drug store for a hundred five-grain tablets for nine cents.

The history of aspirin is most interesting. In 1855 Hermann Kolbe first created salicylic acid. Shortly thereafter another chemist fabricated acetylsalicylic acid, but nothing was done with it for fifty years as it was considered worthless. In 1899 Felix Hoffman of the Bayer Company brought the attention of the medical world to acetylsalicylic acid, and called it aspirin. Since that time the extensive use by the public has turned the profession away from its use.

I have found that pure acetylsalicylic acid in small doses, even as small as two and a half grains, will not only relieve an effort anginal attack but will also stop one if taken in time. Starting with the five-grain tablet, to be followed by a two and a half grain one, is the safest and best analgesic than any patient can carry with him. If they fail to bring quick relief then a one-grain tablet of papaverine hydrochloride will surely control any attack. The physician should always advise the patient to return for an immediate examination when the papaverine is required to control the pain.

Finally, in the control and treatment of any type of heart disease smoking, particularly of cigarettes, should be absolutely forbidden. The great pity of this is that so few physicians know why this should be so. What most physicians do know because of the wide publicity is the intensive cigarette research now being conducted by three groups of distinguished physicians to try to find out what is the relation of the smoking of cigarettes and the great increase in cases of cancer of the lungs in recent years. During the same time an equally great increase of deaths

from heart disease has taken place; while millions of dollars are being spent on cancer research I know only one organization that is spending exceptionally large sums of money on heart research. That is the Life Insurance Medical Research Fund. In their Fourth Annual Report, made in 1948, the money spent for grants and other research projects was $628,-100.66. The number of grants approximated seventy-five, and in not a single instance is smoking or cigarettes mentioned in any way.

The element in tobacco and cigarette smoke that is most dangerous is acid tar. In an article, "The Nicotine Fallacy," MEDICAL TIMES, New York, February, 1936, I showed how easily tar could be removed from cigarette smoke for analysis and study. I further said in the article that the fundamental error in cigarette research was the failure to take into consideration the widely different formulas of chemicals used in cigarette manufacture.

When you make a formula from any and all the chemicals, place them in a confined space, add ten to twenty per cent of water, and then ignite the tobacco, what do you get? You get, as anyone can surmise, a widely varying series of chemical reactions, no two of which are alike. In the *American Journal of Cancer*, November, 1932, Dr. W. D. McNally of Chicago gives an analysis of tar taken from thirty-two different cigarettes, no two of which were alike. In the same number Dr. Emil Bogen stated that he found the tar residue in cigarettes to be 4.84% to 15.29% and that retained in the body 6.56% to 11.58%.

At the present time it is possible to test within a few hours the effect that cigarette tar has on the blood of the smoker. Using a chain smoker to smoke five to ten cigarettes, the blood of the smoker is withdrawn at the beginning, the middle, and the end of the cigarette. You now place the blood in the new flame electrophotometer and get a quick reading of what has happened to the smoker's blood as contrasted with the blood of the control non-smoker. It is hardly necessary to add that this test can only be made in a thoroughly modern and well-equipped laboratory having trained technicians and physicians to make the observations and recordings.

Tar in cigarette smoke is completely dominated and controlled by the moisture content. The moisture content is not only the 10 per cent to 20 per cent of water but also the hygroscopic chemicals that are added by all cigarette manufacturers. These hygroscopic chemicals are glycerine, diethylene-glycol, molasses and rum.

In an effort to find out what, if anything, has been done by the Federal Food and Drug Administration about the chemicals and tars in cigarettes, I wrote the Administration agency and asked two questions: first, how did it happen that while the Federal Drug Commission barred the use of diethylene-glycol from all food and drug products under its control, nothing was ever done about the use of this chemical in cigarettes? Second, what analysis and study had the Commission ever done in their laboratories about the tar that is present in all cigarette smoke? I received the following reply from the Food and Drug Administration:

Federal Security Agency
Food and Drug Administration
Washington 25, D. C.
March 4, 1947

Dr. P. Charles Green
700 West Sedgwick Street
Mt. Airy, Philadelphia 19, Pa.
Dear Dr. Green:

We have your letter of February 26 inquiring why this Department permits the use of diethylene glycol in the manufacture of cigarettes, and inquiring whether we have examined the tars from various brands of cigaretets.

Cigarettes are not subject to the provisions of the Federal Food, Drug, and Cosmetic Act or any other laws enforced by this Administration. Consequently, we have had no occasion to make any investigation of their compositions or the claims made for them.

Very truly yours,
H. WALES (signed)
Acting Chief, Interstate Division

In conclusion I feel it would be well to bring my personal case history up to date. After the completion of the first part, as all attacks of angina had ceased

I cut the medication to once a day. From 1942 through the war years I returned to practice in a limited way by doing special work for one of the major oil companies.

In March, 1948, out of a clear sky, with no previous pain, or attacks of any kind, came a severe attack of gallstone colic. This was followed in two days by a major emergency operation for the removal of a blocked cystic duct. I was under the general anesthetic for two and a half hours. In four days the surgeon had me on my feet, and in seventeen days I left the hospital. So much for what a crippled heart can stand.

Just one year after the operation there was blood in the urine. In my years of practice such an occurrence brought the first thought of cancer of the prostate. With the blood came the return of the effort angina. The angina responded to the treatment I had found so successful.

The hematuria lasted only a few days, and my old friend the urologist after repeated cyrtoscopic examinations never did find the cause. There remained the memory of the five Philadelphia physicians I knew who had shot and killed themselves because of cancer. Three of the five had cancer of the prostate. Two of the five were my intimate personal and professional friends. These men were of the highest standing in both the profession and community. Both held major chairs in two of the largest medical colleges in the country. One of the five had been one of my medical attendants at my first coronary attack. He told my family at the time that there was no hope for me. I could well understand why he found no hope for himself. Very fortunately, the young cardiologist found not only hope but relief. The full story I have set down in the first part.

In the fifty-seven years since my graduation I have had too many fortunate experiences ever to give up hope. There was the operation by my surgical consultant for the removal of a large carcinoma of the stomach from a patient over twenty-two years ago. That patient, at my last report a short time ago, was still alive and still active.

There was my friend, the celebrated surgeon and teacher who, although completely crippled, had taught his classes from a wheelchair for many years before his death. Finally there was the friend who, when he gave me an old painting over forty years ago, said: "In this painting you will find all there is to know about life and death." He said the painting was by an old master, and certainly the treatment of the subject was great enough to have been by Michelangelo himself. The central figures are perfect Michelangelo-type male and female who are looking into a large mirror held by a massive figure of Time. In the right background a draped figure of a skeleton is holding a lance; in the upper left corner a beautiful cherub holding what is obviously the Book of Life from the Apocalypse.

The painting is only eleven by sixteen and yet the whole story of life and death is there. The painting is believed to be over four hundred years old, and still the motifs and symbols and ideas are just as fresh as when some Renaissance master painted them.

The friend who gave me the painting was the late Reverend Cornelius J. O'Neill. Father O'Neill was the close friend of the great American painter, Thomas Eakins. It is Eakins who has come closest to the medical profession through his celebrated paintings of the Gross clinic at Jefferson and the Agnew clinic at the University of Pennsylvania. Eakins painted Father O'Neill's portrait that was sold only last winter at the Walter P. Chrysler, Jr. sale by the Parke-Bernet Galleries in New York, February 16, 1950.

One final thought: I am absolutely sure that just as sulfanilamide is the basic drug of the sulfa chain, so is theophyllin, and not theobromine, the basic drug in the

cardiovascular chain. Theophyllin was found in tea over one hundred years ago. Its value in heart disease has been known for a long time. From it and with it have come many xanthine derivatives. Many physicians and specialists class all these derivatives as being of equal value. *I know that this is not so.* The catch comes in using several of the xanthines in a certain way, and combining them with other chemicals, including the thiocyanates, so as to bring out the greatest value in the combination. If some high-grade research chemists and physicians would work on this problem I feel sure that out of this study would come a control of all cardiovascular conditions as complete as that which comes from the use of insulin in diabetes.

700 West Sedgwick Street

"What Patients Read"—New Schering News Letter for Doctors

"*Medicine in the News*," which is also known as "*What Patients Read*," is the title of a unique new monthly publication now being mailed as a service to physicians by Schering Corporation, pharmaceutical manufacturers of Bloomfield, New Jersey.

Many articles on medical and scientific subjects are currently appearing in lay magazines, newspapers and books. Editors have found that the public is interested in such articles. Some of these news stories merely review in elementary fashion what is known about diagnosis and treatment in a given field. Others describe new developments not yet revealed in published research articles in the scientific and medical literature. These create for the practicing physician serious problems in patient relationships and therapy.

Schering now summarizes many of the popular scientific stories each month and presents them in a concise news-letter form which may be quickly read. This news bulletin constitutes a report to physicians on the medical topics discussed in the lay press. No editorial comments are made. Physicians can now easily find out ahead of time what their patients will read or have been reading in the lay press.

The release of "*Medicine in the News*" by Schering was no chance development. As more and more medical research discoveries are brought by science writers to the attention of an increasingly interested public, the need for such a service became apparent to Schering's executives. Physicians themselves asked for it, and several medical journals printed editorials and articles citing the need. An extensive coast to coast program of opinion-testing was carried on among physicians before Schering finally put the project into regular publication. The demand which resulted was overwhelming, however, and the bulletin has been hailed by physicians as a novel approach in answer to one of their problems.

Rare Type of Cancer May Follow Nail Injury

A rare type of cancer arising in the finger or toe nails is reported by a Peoria (Ill.) doctor in a recent issue of the *Journal of the American Medical Association*.

Appearance of a sore between the cuticle and the nail is a distinguishing characteristic of the cancer, Dr. Lyle W. Russell says. Symptoms such as swelling and moderate pain easily may lead to delayed recognition of the tumor and confusion with other conditions, he points out.

The Control of Spleen Size

Preliminary Note in Chronic Myelogenous Leukemia

LUTHER M. BOYERS, M.D.
Berkeley, Calif.

The case under discussion, Mrs. Wm. (B.) H., our Case #4299, a middle-aged woman, born Jan. 3, 1907, came to us April 4, 1945, because of severe pain, recurring every 6 weeks or so, in the left arm with a duration of 15 minutes. She might at the same time have a slighter pain in the right arm. The first attack had occurred 2 years previously.

The pain began in the forearm and elbow as a "chill" and "a soft pain", increasing to great intensity. Her hands got very cold during the pain.

Blood studies in this case have been made periodically by Associate Professor H. A. Wyckoff, now Emeritus, of Stanford University Medical School, to whom the following letter was addressed by me under date of June 16, 1950:

"This letter will record for my file our conversation Tuesday, June 13, concerning the use of B A L* in chronic myelogenous leukemia, specifically in the case of Mrs. B. H.

"Beginning May 3, 1950, I began to use B A L on my own initiative in 1 and 2 mils doses on the theory the disease is largely toxic in origin. B A L, of course, has been used for years in the toxicity of arsenic and gold poisoning and in my hands once effectively in iodine (quinoline) idiosyncrasy.

"So far it has been found that *apparently* a 1-mil dose of BAL given not too often, meaning about every 24 hrs. to 1 week, *has a favorable effect in reducing the size of the spleen and giving the patient a sense of well-being.*

"As you recall, I formerly used urethane with less satisfaction. (The same statement also holds for Fowler's Solution).

"We have tried to influence the patient's condition with 'alternating' 1-mil doses of BAL, non-specific antigen, and intravenous injectable iron. You saw the result in your last blood study of Mrs. H.

"After two terrific bouts in this case—once with 'virus enteritis' and again with a 'virus respiratory infection'—we have had ample experience with this individual when she was feeling very ill and when comparatively well symptomatically.

"It appears—confessing one's temerity in drawing conclusions from one case—that already a principle may be appearing, i.e., give quite small doses of each medicament. In the meantime call the patient in every 48 hrs. for close observation.

"Your small dose of emergency x-ray treatment—dose of 25 R—is borne in mind and held in reserve. So far it is effective.

"Is the apparent favorable reaction of BAL on the clinical course of this disease

* BAL 2,3-dimercaptopropanol; British anti-lewisite, antidote against arsenical war gases; dimercaprol.

due to its effect on iron metabolism?

(Signed): L. M. Boyers, M. D."

Whenever the spleen has tended to increase in size and the patient to show toxic symptoms such as loss of appetite and sweating and low fever, a 1-mil dose of BAL, along with 1 or 2 mils of nonspecific antigen, have each time caused the spleen to be reduced in size. It is possible that while the liver itself tends also to reduction in size, such change is not so definite as to be easily measurable.

Two additional notes are necessary at this time: 1) By history, it is entirely possible this woman is in the 8th year of her disease. 2) This patient was given arsenic in the form of Fowler's Solution five years ago and its use was continued for some time. It was discontinued when she began to show an intolerance for it which was less than two years after its initial use. It was used briefly again about a year ago.

The spleen was so increased in size as to fill solidly the left half of the abdomen at its maximum size observed in October, 1949. At that time the right border of the spleen was 5 cms. to the right of the abdominal mid-line. The liver was also increased in size.

Under date of July 7, 1950, on examination of this patient, the spleen was found to be mobile and easily manipulated a good 4 fingerbreadths above the left anterior superior iliac spine. It was easily manipulated until the right border was almost in the left mid-clavicular line. Even in that position the flank was not so full of spleen mass as formerly. The liver was apparently smaller also—palpable 4 fingerbreadths below the costal margin in the right mid-clavicular line. The diameter of the right lobe measured in the same line by percussion and palpation did not exceed 21 cms (excursion diameter).

On examination under date of July 10, 1950, the spleen was definitely smaller even than on the 7th inst. It did not fill the left flank and could be easily tipped on edge by grasping the right border between finger and thumb. (Note that this patient has had no x-ray therapy since that to the spleen in January, 1950, when three doses of 25 R each were given.)

Oct. 14, 1950: The apparent effect on the spleen of BAL given semi-occasionally in reducing moderately the size of the spleen continues. At present 1 cc. of a 10% solution — or 100 mgs. (Hynson, Westcott and Dunning, Inc.) is being given every 48 hrs. I. M.

2105 Center Street

Reports Little Danger to Patients From Increasing Use of X-rays

There is no danger to patients from the ever increasing use of x-rays for medical examination and treatment, provided supervision is by physicians and other trained personnel, according to Dr. A. C. Galluccio, radiologist at Mother Cabrini Memorial and St. Joseph's hospitals, New York.

X-rays are now used as a method of treatment for many diseases of the skin, as well as for cancer, Dr. Galluccio points out in a recent issue of *Today's Health*, published by the American Medical Association.

"Most of the equipment is shockproof and substantially rayproof," Dr. Galluccio says. "A small number of accidents did occur when equipment with exposed high tension wires and x-ray tubes was in general use, but it is obsolete today and little used.

"The greatest danger of overexposure is not to the patient but to those who work with x-rays. The roentgenologist and the technician are around stray radiation every day. The cumulative effect may eventually produce undesirable blood changes."

EDITORIALS

Thomas B. Wood, M.D., F.A.C.S.

Doctor Wood, distinguished otorhinolaryngologist, died on September 17. His activities as attending, directing or consultant surgeon covered many years at the Brooklyn Eye and Ear Hospital, the Coney Island and Harbor Hospitals, also in Selective Service work, and as a devoted leader in the affairs of the Associated Physicians of Long Island and the Medical Society of the County of Kings. Aside from the respect growing out of these professional matters, in which he always displayed zeal, wisdom and skill, he was held in special esteem because of his admirable personality. To the MEDICAL TIMES he was always a most helpful colleague, to whom we have been peculiarly indebted for the procurement of scientific contributions of a high order from authoritative sources.

In the words of Shakespeare's Horatio, "Now cracks a noble heart."

Proposed Revision of the Hippocratic Oath

The World Medical Association recently sent up a trial balloon to test professional sentiment regarding a revised Hippocratic oath. The association seems to be unduly allergic to the old oath's archaic form and content—the invocation of Apollo, Aesculapius, et al. Perhaps a new oath will have become extant by the time this editorial appears.

Our reaction to the proposed version is like our feeling about the modernized versions of the King James Bible. Frankly, we don't like the streamlining. The archaic style suits us; if the meanings were not clear to everybody we should favor revision. Let's retain the old style as a matter of art. We are not so matter of fact and scientific as not to hold an art form sacred.

However, we favor *additions* covering violations under threat of the laws of humanity, and "mercy killings."

A New Class Distinction in Britain

George Bernard Shaw, famous dramatist, sustained a fracture of the femur on September 11 and was operated upon promptly at the Luton and Dunstable Hospital. He was cared for by his own personal physicians and nurses in a private room. A London cardiologist was also brought into the case for whose fees Shaw assumed responsibility. In other words, the same obligations were assumed by patient and doctors as would have been the case ten years ago.

The point to consider in this matter is Shaw's spurning of the "free" national health service, for Shaw, as much if not more than any other man, is responsible for the advent of socialized medicine in Britain. He was an early Fabian, has written tons of propaganda, and has been in the forefront of the fight for socialization for many decades.

Nationalization is obviously intended only for the lower orders of the nation; not for the Shaws, the Atlees, the Crippses and the Bevins.

A new class distinction has arisen in Britain, joining innumerable others.

The General Practice Trend

An increasing number of medical schools are taking steps to increase student interest in general practice. Internships are also being shaped accordingly by many hospitals.

In this connection the *Journal of the American Medical Association* of September 9, 1950 points out that the percentage of students planning to enter general practice has increased from 36 to 47 in the last three years, while the percentage planning to specialize has decreased from 36 to 31. Nineteen schools were polled to arrive at these figures. Many of those undecided may eventually swell the percentage headed for general practice.

Difficulties in Entering Medical Schools Exaggerated

According to the Association of American Medical Colleges, 24,434 persons applied for admission to the 1949 freshman class in the medical schools of the United States, of whom one out of every 3.5 was successful in gaining admission; the number admitted was 7,042.

These figures reveal that a serious misconception prevails regarding the chances of applicants who are really qualified to study medicine. Proper qualifications have more to do with character, personality, aptitude and motivation than academic achievements.

Fate of the General Practitioner in Britain

What especially interested us in the Report of the American Medical Association's group of five who investigated medical care in Britain under the National Health Service (J.A.M.A., Aug. 19, 1950) was the declaration that "the general practitioner now finds himself almost completely cut off from hospital connection. In the smaller towns and rural areas he may continue . . . to maintain some contact with in-patient care. The unmistakable trend is away from his direct participation in these activities. The separation of the general practitioner from modern hospital staff functions is recognized as one of the most serious defects in the existing health service."

To the extent that we in this country are guilty of permitting the same principle to apply and operate, we can not in wholly good faith condemn the British system.

However, there are plenty of signs betokening an awakening on this score.

Geriatric Front—A Bombardment

Business has at last found that the aged population is increasing. With this increase there are business opportunities. Drug firms are now preparing special medicines for the aged—some of them good, others are the bunk. Statisticians have drawn diagrams showing to what ailments the aged are subject; naturally remedies will be offered to combat those ailments common to the aged—at least thought to be common.

Doctors are interviewed and tell of some magic powder or tablet which will control arteriosclerosis. Already lay publications are telling the public about lipotropes for arteriosclerosis. Thus when you are called to see a person suffering from coronary artery occlusion, you are told by the family that their friends are taking lipotropes for the same disease. Then we shall hear about cathartics for the aged, antacids, harmless tobacco, vitamins of the therapeutic type, hormones, including hormone creams for the skin. Then we shall see special furniture, electric typewriters to make work easy, woolen underwear, and maybe a return to red flannels. There may be smaller automobiles. There are all sorts of possibilities which advertising agencies will uncover. This does not mean that some of the ideas may not be worth while. Moderation is needed.

M. W. T.

Communication for the Paralyzed

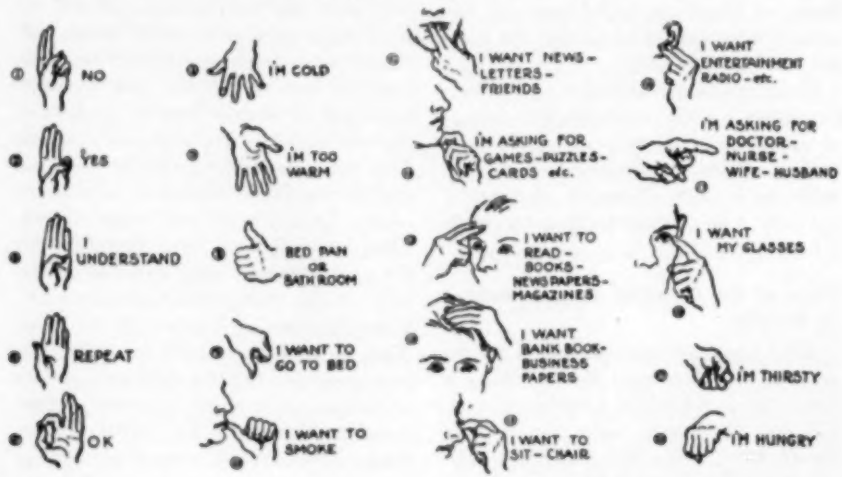
IDA TEITELBAUM, Ph.D.

A new system or method was devised by which stroke victims affected by "complete" aphasia, also daily accident victims and hospitalized aphasic veterans, can communicate with those around them, thus making their wishes and basic needs known by hand-signs, using only one hand, that are simple and easily demonstrated. This method can be used in all speechless cases where the teaching of a complicated hand-sign language is impractical or impossible.

The Chart of Communication was developed by Dr. Hamilton Cameron of New

HAND TALKING CHART

The sign language in the designs speaks for itself. The figures and letters across the bottom are independent of the designs. By pointing with pencil or finger to the letters or figures needed to further a conversation, communication between patient and friend can be amplified even to the "dictation" of a letter by the patient who otherwise would remain completely inarticulate.



York City who in 1943 was stricken by coronary thrombosis, followed by cerebral embolism which resulted in right hemiplegia and "complete" aphasia.

As a patient, he found himself in a situation of being absolutely speechless; he had no way to ask for the things he wanted.

In his first four weeks, while in the hospital, he visualized and devised the twenty-hand-signs. It was two and one half years later before he was able to express himself orally and have an artist make the drawings.

Dr. Cameron is emphatic in his appreciation to Dr. Alfred A. Richman, Medical Director of the Manhattan General Hospital, New York City, for the three year residency during his experiments, research, and self-treatment.

If the patient is speechless *but does* NOT *have visual aphasia*, meaning, he (or she) CAN read, nevertheless demonstrate the hand-signs to him as he follows the directions on the chart.

There are many aphasics (stroke victims who can NOT talk) who are affected by VISUAL APHASIA—they CAN NOT READ but can "*read the pictures*" in books and newspapers—they see the hand-signs and can see the printed word as clearly as you and I, BUT have NO understanding, NO comprehension of the printed words on the chart (although they understand when you are talking). Therefore, it is vitally necessary that you demonstrate the hand-signs to them.

To illustrate: point to the No. 1 hand-sign and hold up your hand and with two fingers held upright say, "This means NO." Then you will know the patient can or cannot follow your hand-signs—IF HE CAN, then demonstrate the other hand-signs but IF HE CAN NOT then help him by taking his hand and put it in the position of the "No" sign.

Then use *your own hand* with the "NO" sign before him and say "This way means NO." Repeat this demonstration again, again and again until you are sure he can make the proper hand-sign for the proper meaning; in other words, that you know he does understand and can use the hand-sign.

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American Medical Association Meets in Cleveland December 5-8

Family doctors are planning a four-day busman's holiday December 5 when Cleveland, Ohio, plays host to the fourth annual Clinical Session of the American Medical Association.

The clinical sessions, comparative newcomers to A.M.A. gatherings, are designed to help today's general practitioner get the latest information regarding medical developments and to keep him right in step with specialists in a variety of fields.

Doctors will hear leading medical authorities discuss treatment of actual cases of cancer. And through the newest medium of color television family doctors will actually see a program of surgery, clinical treatment and examination direct from University Hospital in Cleveland. The telecasts, sponsored by Smith, Kline & French Laboratories of Philadelphia, are earmarked as one of the highlights of the meeting.

Another of the outstanding events of the December clinical session will be the election of America's typical family doctor to receive one of American medicine's highest honors, the General Practitioner's Award. Doctors in line for this recognition are nominated annually by local and state medical societies and elected by the A.M.A. House of Delegates. The award goes to the doctor who best exemplifies the medical profession's standards of service to patient, community and country.

The Legislation Drafting Doctors

[PUBLIC LAW 779—81ST CONGRESS]
[CHAPTER 939—2D SESSION]
[S. 4029]
AN ACT

To amend the Selective Service Act of 1948, as amended, so as to provide for special registration, classification, and induction of certain medical, dental, and allied specialist categories, and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That section 4 of the Selective Service Act of 1948, as amended, is hereby amended by adding at the end thereof the following subsections:

"**(i) (1)** Notwithstanding any other provisions of this title, except subsections 6 (j) and 6 (o), the President is authorized to require special registration of and, on the basis of requisitions submitted by the Department of Defense and approved by him, to make special calls for male persons qualified in needed—

"**(A)** medical and allied specialist categories who have not yet reached the age of fifty at the time of registration, and

"**(B)** dental and allied specialist categories who have not yet reached the age of fifty at the time of registration,

Persons called hereunder shall be liable for induction for not to exceed twenty-one months of service in the Armed Forces. No such person who is a member of a reserve component of the Armed Forces shall, so long as he remains a member thereof, be liable for registration or induction under this subsection, but nothing in this subsection shall be construed to affect the authority of the President under any other provision of law to call to active duty members and units of the reserve components. No person in the medical, dental, and allied specialist categories shall be inducted under the provisions of this subsection after he has attained the fifty-first anniversary of the date of his birth.

"**(2)** In registering and inducting persons pursuant to paragraph (1) of this subsection, the President shall, to the extent that he considers practicable and desirable, register and induct in the following order of priority:

"**First** Those persons who participated as students in the Army specialized training program or similar programs administered by the Navy, and those persons who were deferred from service during World War II for the purpose of pursuing a course of instruction leading to education in one of the categories referred to in clauses (A) and (B) of paragraph (1) of this subsection, who have had less than ninety days of active duty in the Army, the Air Force, the Navy, the Marine Corps, the Coast Guard, or the Public Health Service subsequent to the completion of or release from the program or course of instruction (exclusive of the time spent in postgraduate training).

"**Second** Those persons who participated as students in the Army specialized training program or similar programs ad-

ministered by the Navy, and those persons who were deferred from service during World War II for the purpose of pursuing a course of instruction leading to education in one of the above categories, who have had ninety days or more but less than twenty-one months of active duty in the Army, the Air Force, the Navy, the Marine Corps, the Coast Guard, or the Public Health Service subsequent to the completion of or release from the program or course of instruction (exclusive of the time spent in postgraduate training).

"**Third** Those who did not have active service in the Army, the Air Force, the Navy, the Marine Corps, the Coast Guard, or the Public Health Service subsequent to September 16, 1940.

"**Fourth** Those not included in the first and second priority who have had active service in the Army, the Air Force, the Navy, the Marine Corps, the Coast Guard, or the Public Health Service subsequent to September 16, 1940. Inductions of persons in this priority shall be made in accordance with regulations prescribed by the President which may provide for the classification of such persons into groups according to the number of full months of such service which they have had and for the induction of the members of any such group after the induction of the members of any other such group having a lesser number of full months of such service.

In the selection of individuals from among the categories established by subsection (i) for induction, the President is authorized, under such rules and regulations as he may prescribe, to provide for the deferment of any individual whose deferment is found to be equitable and in the national interest, taking into consideration the length of his previous service in the Armed Forces (including the Coast Guard and the Public Health Service) of the United States, the extent of his participation in the Army specialized training program or similar program administered by the Navy, reasons of hardship or dependency, and the maintenance of the national health, safety, or interest.

"**(3)** It is the sense of the Congress that the President shall provide for the annual deferment from training and service under this title of numbers of optometry students and premedical, preosteopathic, preveterinary, preoptometry and predental students at least equal to the numbers of male optometry, premedical, preosteopathic, preveterinary, preoptometry and predental students in attendance at colleges and universities in the United States at the present levels, as determined by the Director.

"**(j)** The President shall establish a national Advisory Committee which shall advise the Selective Service System and shall coordinate the work of such State and local volunteer advisory committees as may be established to cooperate with the National Advisory Committee, with respect to the selection of needed medical and dental and allied specialist categories of persons as referred to in subsection (i). The members of the National Advisory Committee shall be selected from among individuals who are outstanding in medicine, dentistry, and the sciences allied thereto, but except for the professions of medicine and dentistry, it shall not be mandatory that all such fields of endeavor be represented on the committee.

In the performance of their functions, the National Advisory Committee and the State and local volunteer advisory committees shall give appropriate consideration to the respective needs of the Armed Forces and of the civilian population for the services of medical, dental, and allied specialist personnel; and, in determining the medical, dental, and allied specialist personnel available to serve the needs of any community, such committees shall give appropriate consideration to the availability in such community of medical, dental, and allied specialist personnel who have

attained the fifty-first anniversary of their birth.

Sec. 2 Notwithstanding the provisions of section 203 of Public Law 351, Eighty-first Congress, commissioned officers of the reserve components called or ordered to active duty with or without their consent, shall, if otherwise qualified, be entitled to the benefits of section 203 of Public Law 351, Eighty-first Congress.

Sec. 3 Section 202 of the National Security Act of 1947, as amended, is hereby amended by adding at the end thereof the following subsections:

"**(g)** Under such regulations as he shall prescribe, the Secretary of Defense with the approval of the President is authorized to transfer between the armed services, within the authorized commissioned strength of the respective services, officers holding commissions in the medical services or corps including the reserve components thereof. No officer shall be so transferred without (1) his consent, (2) the consent of the service from which the transfer is to be made, and (3) the consent of the service to which the transfer is to be made.

"**(h)** Officers transferred hereunder shall be appointed by the President alone to such commissioned grade, permanent and temporary, in the armed service to which transferred and be given such place on the applicable promotion list of such service as he shall determine. Federal service previously rendered by any such officer shall be credited for promotion, seniority, and retirement purposes as if served in the armed service to which transferred according to the provisions of law governing promotion, seniority, and retirement therein. No officer upon a transfer to any service from which previously transferred shall be given a higher grade, or place on the applicable promotion list, than that which he could have attained had he remained continuously in the service to which retransferred.

"**(i)** Any officer transferred hereunder shall be credited with the unused leave to which he was entitled at the time of transfer."

Sec. 4 Notwithstanding any other provision of law, where any person who served on active duty as a physician or dentist in the Armed Forces (including the Public Health Service) of the United States subsequent to September 16, 1940, thereafter has been, or shall be, recalled to active duty as a physician or dentist in the Armed Forces (including the Public Health Service) of the United States, such person may, under regulations prescribed by the President, be promoted to such grade or rank as may be commensurate with his medical or dental education, experience, and ability.

Sec. 5 No person inducted under the provisions of this Act shall be entitled to the benefits of the provisions of section 203 of Public Law 351, Eighty-first Congress.

Sec. 6 For the purpose of this Act, the term "allied specialist categories" shall include, but not be limited to, veterinarians, optometrists, pharmacists, and osteopaths.

Sec. 7 This Act, except for section 2 and section 5, shall terminate on July 9, 1951.

Approved September 9, 1950.

Commercial Solvents Award Established for Research in Antibiotics

The Commercial Solvents Corporation and the Society of American Bacteriologists announce the establishment of an annual award for outstanding research in the field of antibiotics.

The award, one thousand dollars and a gold medal, will be given to an individual or a group of individuals working in the Western Hemisphere who contribute to the better understanding of antibiotics.

MEDICINE

MALFORD W. THEWLIS, M.D.*
Wakefield, R. I.

The Effects of Potassium Upon the Heart

C. D. Enselberg and associates (*American Heart Journal*, 39:713, May 1950) report the use of potassium in the treatment of certain cardiac arrhythmias. Potassium was first employed in a woman fifty-eight years of age with arteriosclerotic heart disease who developed ventricular extrasystoles under prolonged digitoxin treatment; the administration of 2 Gm. of potassium chloride by mouth abolished the extrasystoles. Potassium salts have been given by mouth to 31 patients; in 18 of these the arrhythmias were definitely due to digitalis intoxication, and in 9 possibly or probably due to digitalis; in 4 cases the arrhythmia was not associated with the use of digitalis. Potassium was usually given as the chloride, or sometimes as equal parts of potassium chloride and potassium acetate, in a dosage of 2 to 10 Gm. in 20 per cent solution in a syrup; syrup of citric acid was found to be most palatable. Some of the patients were given potassium more than once (40 times in 31 patients). In every instance, ventricular extrasystoles were abolished or reduced; bidirectional ventricular tachycardia was relieved in one case; auricular tachycardia was abolished in 2 cases. In most cases conduction disturbances were made worse by potassium. The effects of a single dose of potassium salts were evident in about half an hour and persisted for at least four hours, sometimes for longer periods. On the basis of these results, the authors conclude that potassium salts are of therapeutic value in some types of arrhythmia, especially in abnormal rhythms due to digitalis intoxication.

COMMENT

One of the best ways to detect potassium deficiency is to study the electrocardiogram. Patients taking digitalis might be given adequate potassium in the diet. It is said that one sliced tomato a day gives a sufficient amount. Potassium therapy must be carefully regulated.

M.W.T.

Treatment of Hodgkin's Disease with Roentgen Irradiations and Nitrogen Mustard

F. H. Bethell and associates (*American Journal of Roentgenology and Radium Therapy*, 64:61, July 1950) report a study of 173 cases of Hodgkin's disease with special reference to clinical symptoms influencing prognosis and the effects of and indications for roentgen-ray therapy and nitrogen mustard therapy. This study has shown that enlargement of the spleen early in the course of Hodgkin's disease indicates a most unfavorable prognosis; a leukocyte count below 6000 per cu. mm. is also of unfavorable prognosis. In early and localized forms of Hodgkin's disease roentgen-ray irradiation has been found to be the best method of treatment; all the regions of the body involved should be

* Attending specialist in general medicine, United States Public Health Hospitals, New York City; consulting physician, South County Hospital, Wakefield, Rhode Island; special consultant, Rhode Island Department of Public Health.

given adequate irradiation, and treatment repeated when there is any sign of local recurrence. Nitrogen mustard therapy has been found of special value in patients with extensive visceral involvement; in those with tissue damage after irradiation or if such damage is anticipated; and in patients with advanced disease. In the latter group, although life may not be definitely prolonged, symptoms are markedly relieved. Nitrogen mustard must be used with caution if leukopenia or evidence of liver damage is present. Alternate courses of roentgen ray and nitrogen mustard therapy have been employed in some cases and this method has "distinct promise" in the treatment of Hodgkin's disease.

COMMENT

This is an excellent summary of the therapy of Hodgkin's disease.

M.W.T.

Clinical Observations on the Severity of Liver Failure in Portal Cirrhosis

W. E. Ricketts and associates (*Gastroenterology*, 15:245, June 1950) report a study of 50 cases of portal cirrhosis; these cases were classified in three groups according to the severity of the symptoms. In all groups there was enlargement of the spleen and liver, vascular dilatation and signs of collateral circulation. The patients in group I (14) showed no symptoms other than this "anatomic evidence" of cirrhosis. The patients in group II (23) showed symptoms of moderate severity; jaundice, ascites and peripheral edema were present in about two-thirds of this group. All the patients in group III (13) were deeply jaundiced and showed symptoms of severe hepatic failure. While there was a history of alcoholism in 38 patients in this series (78 per cent), the severity of the disease was not related to the presence or absence of alcoholism. There was also no correlation between sex or age and the severity of the disease. There were 10 deaths in the series, all occurring in groups II and III; 5 of these deaths were due to hepatic failure, 4 to hemorrhage from ruptured esophageal varices, and one to both hepatic failure and hemorrhage. The treatment employed included a diet high in carbohydrate and protein, but with very little fat; patients who were severely ill and unable to eat were given glucose and plasma intravenously, until they improved sufficiently to take food by mouth. Choline chloride was given in doses of 6 Gm. daily in all cases. Abdominal paracentesis was done only if the distention was "severe and distressing"; repeated paracenteses were not required. When ascites and edema were present, the sodium intake was reduced to 500 mg. daily. In 20 patients (12 of group II and 8 of group III), symptoms due to hepatic insufficiency were completely relieved, although such physical signs as enlargement of the spleen and liver and vascular dilatation persisted; symptoms were partially relieved in 3 other patients in group II. These results indicate "the regenerative capacity" of the liver parenchyma under medical treatment, and that "portal cirrhosis is not necessarily a progressive disease."

COMMENT

Dieulafoy reported many instances of curable portal cirrhosis on a milk diet. This was in 1912. The milk diet was actually a high protein diet. Now with high proteins and carbohydrates plus choline and other agents, many cases are reversible.

M.W.T.

Measurement of the Erythrocytes in the Peripheral Blood in Pernicious Anemia Under Treatment

Vincenzo Mele (*Gazzetta internazionale di medicine e chinurgia*, 53:294, Nov. 1949) reports a study of the variations in the diameters of the erythrocytes in the peripheral blood of 30 patients with pernicious anemia, who were maintained in excellent clinical and hematological remission by adequate treatment. The studies showed the presence of a definite macrocytosis persisting at the time of optimal remission—a true residual macrocytosis.

On the basis of this study, the author advances the theory that this macrocytic anisocytosis is present before the development of the typical symptoms of pernicious anemia, and is not only a characteristic finding in clinical pernicious anemia, but also persists after a clinical and hematological remission has been obtained by liver treatment. This macrocytosis is to be considered as a sign of a constitutional and familial hematologic abnormality in addition to other irreversible constitutional factors in the disease.

COMMENT

We need a simpler method of determining the diameter of the red blood cells. The Price-Jones index is very hard on the technician's eyes. Measurement of a dozen red blood cells requires but a few moments and gives a clue to the diameter. The fact that macrocytosis persists after clinical and hematological remission by liver solution indicates that there might be a constitutional and familial background in these cases.

M.W.T.

Synthetic and Fermentation Type Chloramphenicol (Chloromycetin) in Typhoid Fever

J. E. Smadel and associates (*Annals of Internal Medicine*, 33:1, July 1950) report 23 cases of typhoid fever treated with either the synthetic or the fermentation type of chloramphenicol. The two types of the antibiotic were found to be equally effective in the same dosage. With either type relapses were frequent if treatment was not sufficiently prolonged; the findings in this series indicate that if treatment is continued for fourteen days, relapse is prevented. The administration of chloramphenicol every twelve hours was found to be as effective as more frequent administration, provided the total daily dose was the same. For adequate treatment of typhoid fever in the adult, the authors advise, on the basis of their experience, an initial oral dose of 3 to 4 Gm. of chloramphenicol, then 1.5 Gm. every twelve hours until the temperature is normal and thereafter a single daily dose of 1 Gm. until the fourteenth day. Intestinal hemorrhage occurred in 5 patients, but in 3 of these patients the hemorrhage did not recur during treatment, but one patient later developed intestinal perforation and died. This was the only death in the series. Another patient in the series developed intestinal perforation but recovered under antibiotic treatment without surgery. In one case in an earlier series of typhoid fever cases treated with Chloromycetin (fermentation type), intestinal perforation occurred but the patient recovered without operation. Under chloramphenicol therapy, the classical symptoms of intestinal perforation and generalized peritonitis may be "partially masked," and special attention should be given to the recognition of this complication, even though operation is not always indicated, as the antibiotic may suppress the peritoneal infection.

COMMENT

No doubt about the efficacy of chloramphenicol in typhoid.

M.W.T.

The Effect of 3-Hydroxy-2-Phenylcinchoninic Acid Upon Rheumatic Fever

K. C. Blanchard and associates (*Bulletin of Johns Hopkins Hospital*, 87:50, July 1950) report the use of HPC (3-hydroxy-2-phenylcinchoninic acid) in rheumatic fever (10 cases), rheumatoid arthritis (10 cases) and in 3 cases of asthma and 2 cases of disseminated lupus erythematosus. Previous studies of HPC had indicated that it might be of value in the treatment of diseases that respond to ACTH. In the 10 cases of rheumatic fever, HPC was given in a dosage of 20 mg. per kg. on the first day, and 10 or 20 mg. per kg. daily or on alternate days for periods up to twenty-one days. In all these cases the fever subsided within twenty-four hours, except in 2 patients who had a low-grade fever for several weeks that may not have been due to rheumatic fever. Tenderness and pain of the joints were also relieved promptly but in 4 of the cases swelling of the joints persisted up to forty-eight hours. Three of

the patients had a relapse, but 2 of these responded promptly to re-treatment with HPC and have shown no further rheumatic activity in a three months' period of observation. The third patient became severely ill and died. The effect of HPC on rheumatic carditis could not be adequately evaluated in this series of cases. In the 10 cases of rheumatoid arthritis, the dosage of HPC employed was 20 to 40 mg. per kg. daily for five to seven days. Two of the 10 patients showed definite objective as well as subjective improvement; 8 patients showed subjective improvement of varying degree. Both patients with lupus erythematosus showed some improvement under treatment with HPC but one of these developed a sensitivity to the drug. HPC had no effect in the 2 cases of bronchial asthma. Except for the one case of drug sensitivity noted above, the only undesirable side-effect of HPC was gastrointestinal irritation; this could be prevented by administering the daily dose of the drug in three fractions after a meal with sodium bicarbonate.

COMMENT

Undoubtedly there will be many more drugs which will be used in place of ACTH, drugs which have a similar effect. This is only the beginning of a new era in therapy.

M.W.T.

SURGERY

BERNARD J. FICARRA, M.D., F.I.C.S.*
Brooklyn, N. Y.

Potassium Deficiency in Surgical Patients

E. I. Evans (*Annals of Surgery*, 131: 945, June 1950) reports that a study of patients recovering from operation, for whom constant Wangensteen suction with an indwelling gastric tube was used, showed that if such gastric drainage was continued after four or five days, potassium deficiency, as indicated by a fall in plasma potassium below 3.5 MEQ/L, was likely to occur. Potassium deficiency may occur in patients who have been unable to take adequate food by mouth prior to operation, as in esophageal lesions, pyloric or intestinal obstruction. Fecal fistula, with loss of large amounts of fluids from the fistula, may also cause potassium deficiency. The possibility of potassium deficiency should be recognized in surgical cases in which dehydration and salt loss is produced by excessive vomiting, diarrhea, prolonged gastric suction or other causes; the author has found that if alkalosis (CO_2 content more than 60 volumes per 100) persists in such cases after adequate hydration and administration of sodium chloride, potassium deficiency is to be suspected. If the patient shows extreme muscular weakness and typical electrocardiographic evidence of potassium deficiency (low amplitude of T waves and lengthening of the Q-T interval), rapid replacement of potassium by infusion of KCl solution is indicated; the first few grams of KCl should be given in one to four hours; after that 2 to 4 Gm. daily of KCl above daily losses, given intravenously, is sufficient. Oral administration of potassium chloride is begun as soon as possible; it can be

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given in the form of tablets by mouth, or in solution through a gastric or jejunostomy tube. Potassium deficiency in surgical cases can best be prevented by shortening the period of gastric and intestinal drainage as much as possible, and by determining the indications for intravenous fluid therapy by an "intelligent appraisal" of the condition of each individual patient. Illustrative cases are reported.

COMMENT

The evil effects of excessive gastric suction via the usual routes cannot be emphasized sufficiently. In the light of present knowledge it is realized that physiochemical imbalance is the cause of many complications previously inexplicable. The modern surgeon is no longer a mere technician. The essential components of a surgeon are three: the mental, the moral, and the mechanical. The first has to do with knowledge, the second with judgment and the last with operative ability. The importance of knowledge is emphasized by its position as the first of the surgical trinity. This knowledge changes from year to year. It is this change which marks the modern surgeon. A surgeon is not progressing if he does not increase his knowledge. Present-day contributions in physiology, biochemistry and physics are the necessary supplements of surgery. The future advancements in surgery will arise in the supplementary surgical disciplines and not in technical procedures. Hence it is fitting to place emphasis on the contribution by Dr. Evans on potassium deficiency.

B.J.F.

Fortisan® (Regenerated Cellulose Yarn), A New Suture Material

J. K. Narat and associates *(Archives of Surgery*, 60:1218, June 1950) report a study of fortisan,® a regenerated cellulose yarn, as a suture material. It was found to have greater tensile strength than either silk or cotton; its efficiency was not impaired by repeated autoclaving. While there was some loss of tensile strength of fortisan® after implantation in the tissues of rabbits, it still showed greater tensile strength than either silk or cotton after implantation. In animal experiments, the tissue reaction to fortisan® was minimal, and appeared to be less than with silk or cotton, although the difference in this respect was not pronounced; fortisan,® as well as silk and cotton, produced much less tissue reaction than surgical gut. Following these studies, fortisan® has been used as the only suture material in 16 operations, chiefly abdominal operations. Daily inspection of the operative wound showed no untoward reaction to the suture material, and the postoperative course was as favorable as in similar cases in which other suture materials were used. A check-up of these patients two months after operation showed no instance of extrusion of a suture or sinus formation. In the use of fortisan,® the same "meticulous technic" must be employed as with other nonabsorbable suture materials.

COMMENT

The search for the perfect suture material is like the search of Diogenes for an honest man. Many materials have been employed and the surgeons are divided by their preference of either absorbable or non-absorbable catgut into two groups. In the summation of all the evidence presented the surgeon will choose that type of material which is best in his hands. This is as it should be, even as it is in all things; namely, that a surgeon should do only what his knowledge, judgment and skill permit him to do.

B.J.F.

Surgical Treatment of Hernia in the Aged

F. P. Sainburg *(American Journal of Surgery*, 80:60, July 1950) reports a study of 142 cases of hernia in persons sixty years of age and over; the average age was 66.7 years. In 69 cases, the operation was done as a surgical emergency because of recent incarceration; in 48 cases an elective operation was done; in 25 cases no operation was done because of definite contraindications. In the 69 cases in which an emergency operation was done, there were 11 deaths, a mortality of 15.9 per cent; there were no deaths in the group in which an elective operation was done after careful preoperative preparation. A follow-up of 67.5 per cent of the surviving patients in both operated groups shows a recurrence rate of 13.3 per cent, which is lower than that usually observed in younger patients. While hypertension complicated by cardiovascular disease was considered to be a contraindication to operation, uncomplicated hypertension was not a contraindication to elective operation for hernia. The results obtained in this series indicate that elective operation for hernia should be done more frequently in older

patients than it now is, and that such elective surgery after careful preoperative preparation may obviate the risk of an emergency operation. The indications for elective operation are "essentially the same" in the aged as in younger patients.

COMMENT

Imperative operation and elective surgery are possible in the geriatric patient. Not only is surgery possible but practical. Modern anesthesia, judicious fluid balance and sound surgical judgment have made surgery safe for the aged. Many previous contraindications to surgery are no longer valid excuses for the deferment of operation in the geriatric age group.

B.J.F.

Experience with the Operative Management of 280 Strictures of the Bile Ducts

F. H. Lahey and L. J. Pyrtek *(Surgery, Gynecology and Obstetrics,* 91:25, July 1950) report that 280 patients have been operated on for stricture or destruction of the bile ducts at the Lahey Clinic; some of these operations have been done too recently to make a follow-up study of value. Of the 239 patients operated on up to 1949, 10 could not be traced but a follow-up study of 229 patients is presented. In the 239 cases operated on up to 1949, 344 operations were done at the Clinic, and several of these patients had had three or more previous operations on the biliary tract. There were 24 postoperative deaths in the entire series, a "procedure mortality" of 7 per cent and a patient mortality of 10 per cent. From 1917 to 1939 (inclusive) the postoperative mortality was 22 per cent. From 1940 to 1948 (inclusive), 273 operations were done on 185 patients, with 12 postoperative deaths, a "procedure mortality" of 4.4 per cent and a patient mortality of 6.5 per cent. Since 1939, the use of vitamin K has reduced the number of postoperative deaths due to hemorrhage, and better preoperative preparation has reduced the deaths due to liver failure. Of the 36 patients available to follow-up in the 1917 to 1939 group, excellent results (complete relief of symptoms) and good results (with only mild symptoms) were obtained in 23 patients (64 per cent). Of the 169 patients available for follow-up in the 1940 to 1948 group, excellent and good results were obtained in 138 patients (81.7 per cent). A study of results obtained with different types of operations employed indicates that the procedure of choice is end-to-end, mucosa-to-mucosa anastomosis, which preserves the sphincter of Oddi. In some cases, the lower end of the common duct is dissected from the pancreas for end-to-end anastomosis to the proximal section of the hepatic duct; the technique of this operation is described. The best results in cases of injury to the bile ducts are obtained when the repair is done at the time of injury or as soon as possible after injury.

COMMENT

There is one abdominal operation which should be respected from the viewpoint of possible complications. This operation is elective cholecystectomy. The dangers and their avoidance have been discussed on innumerable occasions by Dr. Lahey. This latest report by him calls attention to this hazard, and presents the results of his studies.

B.J.F.

Classification and Treatment of the Varicose, Post-Thrombotic, and Arterial Venous Problems

G. H. Pratt *(Bulletin of The New York Academy of Medicine,* 26:306, May 1950) discusses the treatment of dilated veins of the lower extremities based on his own experience in the last fourteen years. He distinguishes three classes of cases: Simple varicose veins; pathological venous clotting; arterial varices. It has been found, in the author's experience, that only 10 to 15 per cent of cases of varicose veins can be treated by the injection of a sclerosing solution. Where incompetent valves are present, operation is indicated; the standard surgical procedure now employed in cases of varicose veins is more extensive than earlier surgical methods. It includes a resection of at least one inch of each branch of the great saphenous vein in the groin and of at least 3 inches of the saphenous vein and proximal liga-

tion of the saphenous vein flush with the femoral vein; a wide resection of each incompetent point and ligation of each perforating vein coming to the saphenous from the femoral vein; a resection of the lesser saphenous vein at its popliteal insertion; stripping of the veins between the groin and each incompetent point with an intraluminal stripper (Babcock type). After operation, Ace bandages are applied from the toes to the groin and the patient is allowed to walk after four to six hours; adequate bandage support is maintained for four to eight weeks. Satisfactory results are obtained in 75 to 85 per cent of cases. Two groups of cases of pathological venous clotting are distinguished, thrombitis, in which the primary pathological change is inflammation of the vein wall; and thrombosis, in which pathological clotting is the primary factor. Early uncomplicated cases of thrombitis can be treated by sympathetic nerve block and anticoagulant therapy; later the involved veins may be resected. Anticoagulant therapy alone is indicated in early cases of thrombosis with the clot in the small blood vessels; if there is evidence that the clot is in the femoral vein or higher, ligation of the common femoral vein is indicated, or in some cases, a vena cava ligation is necessary. Adequate support by Ace bandages and elevation of the leg when the patient sits or lies down and whenever the leg swells on walking are important in the treatment of both types of pathological clotting. In cases where a post-thrombotic syndrome develops, sympathectomy is of value. In cases of arterial varices, due to arteriovenous connections, treatment is "far from satisfactory." Extensive venous resection, with resection of all arterial and venous branches entering the saphenous vein, is necessary; and later secondary ligations and resections may be indicated. Arterial varices of this type are not of frequent occurrence, probably representing 4 to 5 per cent of all cases of enlarged veins of the lower extremity.

OPHTHALMOLOGY

RALPH I. LLOYD, M.D., F.A.C.S.*
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The Sulfonamides and Penicillin in Trachoma

A. A. Siniscal (*American Journal of Ophthalmology*, 33:715, May 1950) reports a study of the treatment of trachoma with various sulfonamides, penicillin and bacitracin in more than 3,000 cases at the Missouri Trachoma Hospital. In this study it was found that sulfonamides are the best therapeutic agents at present available for the treatment of trachoma. Among the sulfonamides employed, sulfacetamide solutions and solutions of the new sulfonamide Gantrisin (3, 4-dimethyl-5-sulfanilamidoisoxatole), also designated as NU-445, were found to be the most effective for local application. Another new sulfonamide preparation, Combisul (a combination of equal parts of sulfadiazine, sulfamerazine and sulfathiazole) was given by mouth. The most effective plan of treatment was found to be local application of sodium sulfacetimide solution (10 per cent) or Gantrisin solution (4.3 per cent) instilled into the conjunctival sac every two hours during the day and sulfacetimide ointment

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(10 per cent) applied to the conjunctival surfaces overnight. During the first week of local therapy, sulfadiazine, combisul or Gantrisin was given by mouth. This treatment resulted in the relief of symptoms and subsidence of all inflammatory signs in ten days to three weeks in newly infected cases of trachoma of mild or moderate degree; several weeks of treatment are necessary in more severe cases; in the cases where local sulfonamide therapy must be prolonged over one month, another course of oral sulfonamide therapy is given at the beginning of the second month. In cases resistant to sulfonamide after six weeks of treatment, the sulfonamide treatment is discontinued for a time, and an intermediate course of silver nitrate and zinc sulfate therapy is employed; the silver nitrate (20 per cent) is applied in the morning, and zinc sulfate solution (0.125 per cent) is instilled into the eye every two hours during the day. Where "corrective surgery" is indicated, operation is usually done after the sulfonamide treatment has been employed for ten days, as even severe cases show some improvement during the sulfa therapy, so that the turgescence and swelling are reduced. Bacitracin and penicillin were not found to be effective against trachoma per se, but are of value in the control of secondary infections complicating trachoma, thus aiding recovery.

COMMENT

A very fine contribution to trachoma therapy. In the eastern part of the U.S., the disease is now so rare that treatment of such a number of cases is not possible. Acute trachoma is often more resistant to treatment than the more chronic forms. In all acute cases, smears and cultures should be made because other infecting agents are active and require special treatment.

R.I.L.

Use of Curare in Cataract Surgery

D. B. Kirby *(Archives of Ophthalmology*, 43:678, April 1950) reports the use of curare with local anesthesia for cataract surgery; the use of curare in cataract surgery was suggested to him by the reports published showing that curare acts first upon the ocular muscles. Curare is not indicated in all operations for cataract but only in those cases in which the use of sedatives, analgesics, local anesthesia and palpebral and orbital akinesia, as usually employed, have failed to produce the necessary degree of relaxation, probably 15 to 20 per cent of all cases of cataract. When curare is considered to be indicated, a skilled anesthetist must be employed, and the eye must not be incised until "the peak" of the effect of the injection of curare has passed—within three minutes after the injection is completed. In the past two years intocostrin® or *d*-tubocurarine, given by intravenous injection, has been used in over 100 cataract operations in conjunction with local anesthesia. When the use of curare was begun, the author often employed a dosage of 60 units, but later found that smaller doses, 40 to 50 units (6 to 7.5 mg.), were effective in most cases. In this series, there were only 10 patients in whom satisfactory ocular and general relaxation were not obtained, and in 3 of these vitreous was lost. But as in a previous series of unselected cases loss of vitreous occurred in 4 to 6 per cent, and the patients in this series were definitely poor risks, the results can be considered as satisfactory. In some cases in which operation for cataract is indicated, especially in patients with only one eye remaining, local anesthesia is not suitable; in these cases intravenous thiopental with curare appears to be preferable to thiopental alone. As with local anesthesia the incision into the eye should not be made until the injection of curare is completed.

COMMENT

Curare can be used only in institutions where large numbers of cataract operations are done. The complicated cases with but one eye remaining are not easy to handle and the prognosis at best is poor. These problems will have to be worked out in large eye hospitals and the average ophthalmologist will wait for the verdict before using the procedure.

R.I.L.

Aureomycin in the Treatment of Herpes Simplex Corneae

P. Thygeson and M. J. Hogan *(Ameri-*

can Journal of Ophthalmology, 33:958, June 1950) report the use of aureomycin in the treatment of 24 cases of herpes simplex of the cornea. In all these cases an aureomycin borate solution (0.5 per cent) was instilled into the eye at half hour intervals. The patients were not hospitalized, but were given fresh solution for local treatment of the eye every forty-eight hours. In 14 of these cases the corneal lesion healed completely (no staining of the ulcer) in four to seven days; 3 of these patients were treated during the second attack of the disease. In 6 of the 11 cases that did not respond satisfactorily to aureomycin therapy, local application of tincture of iodine was employed. In one case treated during the second attack, there was no response to local aureomycin therapy, but when the patient was hospitalized and given aureomycin orally while the local applications were continued, the lesion gradually cleared. On the basis of these results, the authors conclude that cure can be obtained in approximately 60 per cent of cases of dendritic keratitis such as are encountered in routine practice, with local application of aureomycin in at least six or seven days. Application of tincture of iodine gives almost equally good results in some cases, and it is possible that the two methods of treatment "may supplement each other." In cases in which the corneal lesions fail to respond to local aureomycin therapy "within a reasonable period," the tincture of iodine treatment should be employed.

COMMENT

The treatment of herpes of the cornea is not merely a question of what local treatment is best because the vitality of the cornea does not ever return to normal and the eye is liable to recurrences and to local ulceration because of inability of the eye to withstand exposure to dust and air.

The best local remedy in the commentator's opinion is 95% Carbolic acid. The eye must be kept closed and covered until the sensitivity of the eye is approximately normal. The patient must thereafter keep at hand some protecting device like the expansion shield to be used during cold or windy weather. Relapses occur and recur over periods of observation of 15 years.

When the ulcer has healed, the eye must not be exposed to the air until the cornea is sensitive to a wisp of cotton. The eye can be white and without discharge, but disciform keratitis or ulceration may set in.

R.I.L.

Ocular Manifestations of Sarcoidosis

J. A. Van Heuven (*American Practitioner and Digest of Treatment*, 1:619, June 1950) has found that the most common ocular lesions in sarcoidosis are conjunctivitis and iridocyclitis. The conjunctivitis is usually follicular in type, but in some cases the "cock's comb" type is observed, but never any ulceration. Iridocyclitis is the most frequent ocular lesion in sarcoidosis. Reports in the literature indicate that real choroiditis is rare in sarcoidosis but the author has found that it occurs more frequently than has been supposed; he reports an illustrative case. Optic neuritis often occurs in sarcoidosis, more frequently than in tuberculosis; it sometimes follows and sometimes precedes the iridocyclitis; recovery is the rule in sarcoidosis, but occasionally atrophy of the optic nerve results in blindness. Other neuritides are also of more common occurrence in sarcoidosis than in tuberculosis; the author reports one case of sarcoidosis with paralysis of accommodation without other ophthalmological findings except "a slight slowness of pupillary reaction." The author is of the opinion that ophthalmologists should give more consideration to the possibility of sarcoidosis in eye lesions in which the etiology is obscure, especially in inflammations of the uvea. There is a tendency to classify some of these as tuberculosis, but in sarcoidosis the tuberculin reaction is negative and examination by an internist shows no evidence of active tuberculosis. The presence of the cutaneous lesions may also suggest the diagnosis. As a rule the prognosis for the eye lesions is much more favorable in sarcoidosis than in tuberculosis.

COMMENT

The diagnosis of sarcoidosis is not easy. The bones of the hand, the lungs and lymph glands may

be involved as well as the eye. The fundus lesions resemble those of tuberculosis and the diagnosis is reached if the usual t.b. tests are negative. The absence of caseation is also indicative but tissue for this test is obtained late. Microsections of involved retinal arteries are very much like definitely t.b. lesions. It is not a satisfactory situation for the ophthalmologist if he must reach his diagnosis by the negative route.

R.I.L.

Beta-Ray Application to the Eye

H. L. Friedell and associates *(American Journal of Ophthalmology,* 33:523, April 1950) report the use of beta rays in the treatment of certain eye conditions and describe the applicator employed. This applicator has a lucite capsule enclosed in an aluminum cover; the ends of both are made as thin as possible (0.25 mm.). Strontium is introduced into the lucite capsule as a chloride solution, which is evaporated by passing warm dry air over it. Radiation from this Sr^{90} applicator consists entirely of beta rays, not accompanied by gamma rays; the half life of Sr^{90} is twenty-five years, so that the applicator requires calibration only once. The use of beta rays is of special value in the eye, where it is important to protect the deeper structures from harmful radiation effects. The beneficial effects of beta radiation result from ionizing radiation which can be produced by x-rays, but with the use of x-rays in the treatment of superficial eye lesions, it is difficult to protect the deeper structures with the types of apparatus now available. With the Sr^{90} applicator, treatment is given by direct contact for sixty seconds, a dosage of approximately 325 roentgens. Among the eye lesions treated by this method with good results are small benign tumors of the eyelids and conjunctiva, early cases of vernal conjunctivitis, tuberculosis of the anterior segment, and vascularization of the cornea. While early cases of vernal conjunctivitis respond favorably to this form of beta radiation, in long-standing cases surgical excision of the lesion is often necessary followed by beta radiation to prevent recurrence.

COMMENT

Opinions as to beta radiation are conflicting. The average ophthalmologist must await further reports of cases by observers in clinics specially equipped for treatments of this type.

R.I.L.

✤

Whooping Cough Death Toll Drops

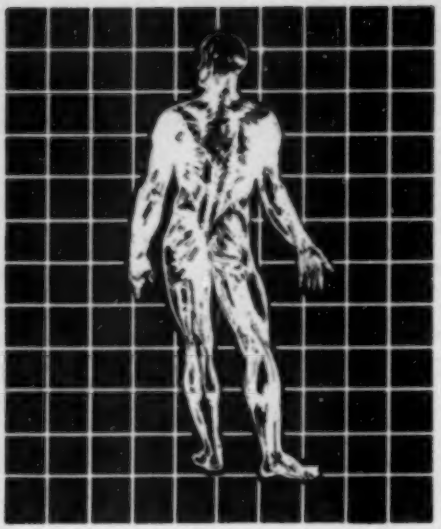
Last year for the first time, deaths from whooping cough in the United States fell below 1,000, according to Metropolitan Life Insurance Company statisticians. The final figure may be less than 800.

This landmark in the control of the disease takes on added significance, the statisticians note, because the number of young children in the population has increased greatly due to high birth rates in recent years.

The gains against whooping cough have been especially rapid in the last 10 years. In 1948 and 1949 the death rate among infants, where the bulk of the mortality from the disease is concentrated, was at least 75 percent below the figure of a decade ago.

Even allowing for the cyclical fluctuations in the occurrence of the disease, the number of reported cases at all ages has declined sharply. In both 1948 and 1949 the number was below 75,000, while the previous minimum was nearly 110,000. In the 1930's the total only once fell below 150,000.

A substantial part of the credit for the gains against whooping cough is given to the wide acceptance of the vaccines for immunization against the disease, and to advances in the care of infants with the disease.



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PSORIASIS	11	2	4	5
NEURODERMATITIS	5	3	2	–
ATOPIC ECZEMA	8	6	1	1
SEBORRHEIC DERMATITIS	6	5	1	–
VARICOSE ECZEMA	4	1	1	2
ALLERGIC DERMATITIS	3	–	2	1
LICHEN PLANUS	3	2	1	–
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%		54.9	25.5	19.6

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**Lowenfish, F.P., N.Y. State J. Med., 50:922 (Apr. 1) 1950.*

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MEDICAL BOOK NEWS

All books for review and communications concerning Book News should be addressed to the Editor of this department, 1313 Bedford Avenue, Brooklyn 16, New York. When books are sent to us with requests for review, selections for that purpose are promptly made.

Speech

SPEECH THERAPY FOR THE PHYSICALLY HANDICAPPED. By Sara Stinchfield Hawk. Stanford, Calif., Stanford University Pr., [c. 1950]. 8vo. 245 pages, illustrated. Cloth, $4.00.

This book combines chapters on the causes for difficulties in speech and practical methods of handling the speech problems.

It is applicable to children and there is also a chapter on the training of physically handicapped adults.

The book is of particular use to those interested in this field.

STANLEY S. LAMM.

Gastroscopy

STOMACH DISEASE AS DIAGNOSED BY GASTROSCOPY. By Eddy D. Palmer, M.D. Philadelphia, Lea & Febiger, [c. 1949]. 4to. 200 pages, illustrated. Cloth, $8.50.

This is an excellent text book on gastroscopy, which, in the words of the author, is "an illustrated discussion of the gastroscopic aspects of the normal and diseased stomach, with bibliographic coverage, as a point of departure for the physician who is already familiar with the contraindications, technic and orientation of gastroscopy."

The style is pleasing and description of gastroscopic views is authentic, as will be recognized by any having even slight experience with the method. Description of the gastritides, antral gastritis, etc., emphasizes the fact that much pathology within the stomach is obscure except to the direct visual method.

Gastroscopic examination is characterized as supplementary to other diagnostic procedures in gastric disease. An effort is made to correlate findings with those of the roentgenologist, surgeon and pathologist.

HENRY F. KRAMER.

Vascular Surgery

SURGICAL MANAGEMENT OF VASCULAR DISEASES. By Gerald H. Pratt, M.D. Philadelphia, Lea & Febiger, [c. 1949]. 8vo. 496 pages, illustrated. Cloth, $10.00.

The author, who has had vast clinical experience in the peripheral vascular field, has correlated all the scientific data of recent years on this subject.

It is a book that can be well used as reference by other workers in the field, as well as for a complete survey by the neophyte who will avail himself of a comprehensive analysis and summation in vascular diseases in the modern concept.

Controversial subjects are included, and the author's clinical opinions, based on his own experience, are fairly presented without undue bias.

It is a book that should be found in every hospital library for resident and interne training in peripheral vascular diseases.

HUGH L. MURPHY.

—Continued on page 556

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THERAPEUTICALLY—aids in control of bleeding in gastric and duodenal ulcers, hematemesis, hematuria, uterine bleeding, epistaxis, blood dyscrasias, etc.

KOAGAMIN* ACTS IN MINUTES, regardless of the cause of bleeding. Vitamin K is slow in action and indicated only where prolonged prothrombin time is a factor. In such cases Koagamin may be used in conjunction with Vitamin K to effect more rapid control of bleeding.

**aqueous solution of oxalic and malonic acids for parenteral use*

Supplied in 10 cc. diaphragm stoppered vials.
Comprehensive dosage chart and literature on request.

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Available Through Your Physician's Supply House or Pharmacist

MEDICAL BOOK NEWS

—Continued from page 554

Cancer Diagnosis

THE CYTOLOGIC DIAGNOSIS OF CANCER. By the Staff of the Vincent Memorial Laboratory of the Vincent Memorial Hospital, a Gynecologic Service Affiliated with the Massachusetts General Hospital, Boston, Massachusetts. Philadelphia, W. B. Saunders Co., [c. 1950]. 8vo., 229 pages, illustrated. Cloth, $6.50.

This book is of great value to those qualified to make cytological diagnosis of smears prepared from the various mucosal surfaces and fluids of the body.

The illustrations are beautifully reproduced of both normal and pathologic cells that are found in these various sites. Detailed descriptions of their characteristic features accompany each illustration as well as a brief text elaborating upon the biology, source, and difficulties of interpretation of the cells that are seen in the smear.

This is a valuable book, especially to the student of cytology and pathology.

CASPAR G. BURN.

Maxillofacial Surgery

SURGICAL AND MAXILLOFACIAL PROSTHESIS. By Oscar Edward Beder. New York, King's Crown Pr., [c. 1949, The Author]. 4to. 51 pages, illustrated. Paper, $3.00.

This pamphlet of 51 pages covers the application of splints in the care of maxillofacial fractures, taking the impression for the splints, their construction and application; use of stents for retention of skin or mucous-membrane grafts; protective shields in Radiation Therapy; Obturators; appliances to correct resected or missing portions of the Mandible; Somatoprostheses, that is, extra-oral or maxillofacial prosthesis. This booklet will be invaluable to both oral surgeons and general surgeons who are called upon for maxillofacial surgery.

LAWRENCE JOSEPH DUNN.

The Surgiset for your dispensary

SKIN CLOSURE SUTURES

Complete Emergency Suture Assortment IN STERILE PACK JARS, READY TO USE

You don't waste time boiling tubes when you have the Surgiset. The germicide in the jars keeps tubes sterile.

Surgiset contains 3 dozen Atraloc eyeless needle sutures: 5-0 monofilament nylon on small cutting needle for facial repair; 3-0 dermal on medium cutting needle for normal skin repair; 2-0 dermal on heavy cutting needle for heavy skin.

Surgiset contains an extra jar for storing your other sutures.

Supplied complete with chrome-plated rack for the regular price of 3 dozen emergency sutures. (Jars and rack given without charge.)

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ETHICON SUTURE LABORATORIES, INC.

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MODERN THERAPEUTICS

Ocular Effects from the Systemic Administration of Antihistaminics

Case reports are given on 4 patients in whom there were ocular side-effects resulting from the systemic administration of the antihistamine, tripelennamine. Each patient complained of blurred vision both far and near. In the four cases the factors determined as abnormal were corneal edema, refractive changes, and depression of accommodation. The factors were somewhat different in each case. Ross, writing in *Am. J. Ophthalmol.* [32 (1949)] stated that the depression of accommodation might be explained on the basis of the atropine-like action of the drug. All of the changes abated with discontinuance of the tripelennamine.

Aureomycin in Brucellosis

Four cases of brucellosis caused by *Brucella abortus* were treated with aureomycin and reported by Lindeck in *Brit. Med. J.* [No. 4660:985 (Apr. 29, 1950)]. One patient received a total of 18.5 Gm. over a period of 10 days; another 16 Gm. over a period of 12 days; a third patient two series, the first 8.2 Gm. over 6 days and the second 6.2 Gm. following a relapse; and the fourth patient received 47-.25 Gm. over a period of 10½ days. No relapses had occurred during 5½ to 8½ months of observation. The larger doses caused transient gastric irritation during treatment but no other side effects were observed.

The author then compared the results which he had obtained with a few other published results and concluded that the total amount of drug administered and the length of time over which it is administered must be considered. Since one of the other investigators had reported that relapses had occurred even after a course of 21 Gm. of aureomycin, the author recommended that, in cases of brucellosis, 4 to 6 Gm. of aureomycin be administered orally each day for 2 weeks with a build up to that quantity by giving 0.1, 0.6, and 1.6 Gm., respectively, in divided doses, on the first 3 days. In case of resistant or recurring infections it was recommended that aureomycin (3 Gm. a day in divided doses) combined with dihydrostreptomycin therapy (1 Gm. twice a day intramuscularly for 12 or 14 days) be given. One author had previously reported that he had obtained negative blood cultures following this combined therapy. The ease of administration of aureomycin and the low incidence of side effects makes aureomycin therapy quite desirable.

Use of Gantrisin in Bacterial Meningitis

Gantrisin (5-(p-aminophenylsulfonamido)-3, 4-dimethylisoxazole) was administered to 5 adults and to 5 young children within 3 days of the onset of symptoms of meningococcic meningitis. The total dose for the first day varied from 3 Gm. for an 18 month infant to 10 Gm. for adults. The drug was given intravenously. Maintenance doses of 6 to 16 Gm. a day were given intravenously and/or orally in divided doses for periods of 5 to 11 days. All of the patients recovered with fever lasting for 3 to 9 days. Two adult patients with pneumococcic meningitis recovered and one died when given combined treatment with Gantrisin and penicillin. Gantrisin and 500 to 800 mg. of streptomycin a day for 10 to 22 days brought about recovery in 2 children with *Hemophilus influenzae* meningitis.

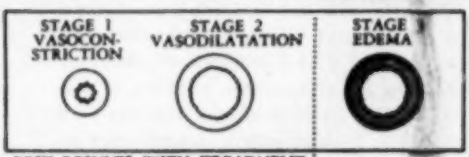
Rhoads, Svec, and Rohr, writing in *Arch. Intern. Med.* [85:259 (1950)], stated that the blood levels of Gantrisin

—Continued on page 58a

"Although E.C. 110 (CAFERGONE) was developed primarily for the relief of the migraine attack, it is uniformly effective and has a much wider range of usefulness in the relief of headache of all other types, especially typical and atypical histaminic cephalgia." (Hansel)[1]

For The First Time In Almost Two Thousand Years, clinical trials of an oral preparation indicate that migraine and other vascular headaches can be aborted in 85-90% of cases.

Although the cause of migraine is still unknown, the mechanism productive of head pain has been determined.[2] Today, it has been observed that the head pain in classical migraine and related disorders is produced through abnormal behavior of the cranial vascular system. The affected arteries, principally branches of the external carotids, become constricted in the early stage of the attack. Such vasoconstriction results in pre-headache warning signs such as visual and other sensory disturbances. Later in the attack, these arteries become relaxed and dilated. *At this point, agonizing headache begins.* Exaggerated pulsations and thickening of the affected arterial walls cause stretching of and



BEST RESULTS WITH TREATMENT IN STAGE 1 OR EARLY STAGE 2

pressure upon adjacent pain-sensitive structures. Headaches of this type may last for a few minutes only or they may last for days. Seizures are usually terminated by severe vomiting.

As a result of recent research, these headaches can be aborted for the great majority of sufferers. *Attention has been centered on the development of an effective oral preparation to relieve vascular headaches. Cafergone.* (100 mg. caffeine and 1 mg. ergotamine tartrate per tablet) *is the result of this research.* Ergotamine tartrate (Gynergen) has long been known as a potent vasoconstrictor.[3, 4] Caffeine, when administered orally, also acts as a vasoconstrictor.[5] Simultaneous administration of ergotamine tartrate with caffeine in Cafergone tablets has the added advantage of reducing the usual dose of ergotamine necessary to abort these headaches.[6]

These measures will abort vascular headaches for 85-90% of sufferers:[1,4,6,7]

1. Give complete physical examination including ancillary tests to rule out other conditions mimicing migraine.
2. Advise the patient to re-organize his activities where possible.
3. Improve the general health of the patient.
4. Give 2 Cafergone tablets at first sign of impending attack and, if necessary additional 1-tablet doses (up to 6) at half-hour intervals.

Literature available on request, for further particulars on *Dosage Adjustment* and other points:
Reprints of recent reports
Therapeutic brochures
Chart, "Clinical Characteristics of Vascular Headaches."

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Sandoz Pharmaceuticals

DIVISION OF SANDOZ CHEMICAL WORKS, INC.
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—Continued from page 56a

averaged 12.5 mg. per 100 cc., free and combined, and that spinal fluid levels were 1/3 to 1/2 the blood levels. Albuminuria, present in 8 patients before treatment, disappeared after treatment.

Therapeutic Use of Gantrisin in Pediatrics

Gantrisin (5-(*p*-aminophenylsulfonamido)-3, 4-dimethylisoxazole) was administered orally for periods of 3 to 10 days in doses of 1 to 2 gr. per lb. of body weight in 4 to 6 divided doses to 71 children ranging in age from 5 months to 11 years. The initial and sometimes the second dose was doubled in these children suffering with various infections. Using the return of the temperature to normal as a criterion, Bigler and Thomas stated in *Am. J. Dis. Child.* [79:785 (May 1950)], that in 19 children with severe to moderate tonsillitis the temperature returned to normal within 12 to 24 hours; in 2 with inguinal, 2 with cervical, and 1 with axillary adenitis within 12 to 36 hours; in 8 with bronchitis within 24 to 36 hours; and in 7 with lobar penumonia, 6 with bronchopneumonia, 9 with otitis media, and 4 of 7 with miscellaneous infections the temperature returned to normal within 24 to 48 hours. The treatment failed in 1 child with a urinary tract infection due to nonhemolytic streptococcus, in 3 children with atypical pneumonia, 1 with rheumatic fever, and 1 each with infectious mononucleosis and exanthema subitum.[2] The drug caused no crystalluria, hematuria or blood changes.

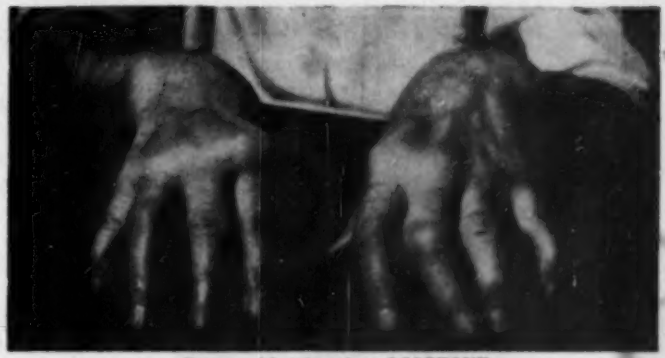
Sulfanilamide Mixture in the Prevention of Empyema

A mixture of sodium tetradecyl sulfate 1:500 in chloroazodin 1:300 with 5 Gm.

—Continued on page 60a

*One of a series of reports on CORTONE**

Clinical Response in Rheumatoid Arthritis



Prior to Administration of CORTONE

After Treatment With CORTONE Over a 16-day Period

Patient—M. D.:
Rheumatoid Arthritis.

History:
Disease present for eight years prior to administration of Cortone. Previous treatment included gold therapy, tonsillectomy, and general supportive measures.

Result:
Excellent subjective response; joint swellings greatly reduced; true weight gain of 4 lbs.

From the Arthritis Service of Herman H. Tillis, M.D., Beth Israel Hospital, Newark, N. J.

CORTONE (Cortisone), which is now abundantly available, has been used in the treatment of thousands of patients with rheumatoid arthritis. In virtually every case reported in the extensive literature, treatment with Cortone has produced remission of symptoms and signs of the disease.

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(11-dehydro-17-hydroxycorticosterone-21-acetate)

**CORTONE is the registered trade-mark of Merck & Co., Inc. for its brand of cortisone.*

—Continued from page 58a

sulfanilamide was instilled into the pleural cavities of 14 patients with grossly contaminated pleural spaces following pneumonectomy. The mixture was placed in the pleural cavity in an amount of 500 cc. before the chest was closed and then the pleural cavity was aspirated and 200 to 500 cc. was instilled on 3 consecutive days following the operation or until 3 consecutive negative pleural cultures were obtained. Sulfanilamide was given orally for 48 hours previous to the operation and penicillin, streptomycin, or both were administered after the operation. Rigdon and Brantigan reported in *J. Thoracic Surg.* [19:319 (1950)] that empyema developed in only one patient who was treated in this manner and this patient was sensitive to antibiotics and to sulfanilamide. They stated, also, that clinical trial showed that the mixture eliminated most types of pyogenic bacteria from the pleural cavity but after empyema was established it controlled but did not eliminate hemolytic *Staphylococcus albus* or *S. aureus.*

Sulfonamides in Cervical Inflammation

Ninety-five patients with chronic cervicitis were treated topically with a cream containing sulfathiazole, sulfacetamide, N-benzoylsulfanilamide and urea, or with sulfathiazole and lactose, or with sulfonamide tablets along with vinegar douches. In addition 300,000 units of penicillin in oil and wax were given intramuscularly once to 9 patients, twice to 6, and 3 or more times to 13. In 5 of the latter patients the penicillin was used in the treatment of syphilis. Prejean concluded, in *New Orleans Med. and Surg. J.* [102:365 (1950)], that the multiple sulfonamide preparations will give good re-

sults in the treatment of chronic cervicitis and are of great value in pre- and post-cauterization and in operative treatment of the cervix and vagina. Penicillin proved to be effective in the more refractory cases.

The Effect of Sodium Dodecyl Sulfate on Gastric Secretion

White rats were used to study the effects of the introduction of 0.1, 0.5, 1, and 2 per cent solutions of sodium dodecyl sulfate into the empty fasting stomach. Control groups received distilled water alone and 0.066 per cent solutions of sodium sulfate. It was found that there was a definite response of the secretory mechanism in each case but that the nature of the response varied with the concentration of the drug. With the lower concentrations, those from 0.1 to 1 per cent, all of the secretory elements, namely the parietal, peptic, and mucus secreting cells, were markedly stimulated. However, the 2 per cent solution exhibited a selective effect in that only the mucus secreting cells were stimulated. The stomach contents with the latter solution were found to be alkaline in pH, there was no detectable peptic activity, there was a marked increase in viscosity due to the increased mucus content, and there was an extremely low chloride content.

Further studies indicated that the mechanism of the secretagogue action of sodium dodecyl sulfate was entirely reflex by way of the vagus so far as the parietal and peptic cells were concerned. But the mucin secretion was only partially inhibited by atropine and by ligation of the vagi, indicating that the mucigogue action was only in part reflex by way of the vagus.

Komarov, Shay, Siplet, and Gruenstein stated, in *Brit. J. Pharmacol.* [5:1 (1950)], that the decrease in parietal secretion and in peptic activity concomitant with an increase in mucus secretion

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would be very desirable in the management of peptic ulcer in human beings. They suggested that former poor results in this respect may have been due to lack of control of the final concentration of the agent in the stomach.

Intravenous Iron Therapy in Anemia

It has been found that saccharated iron oxide does not produce the toxic reactions which even very small doses of most iron salts elicit upon intravenous injection. It has also been shown that this compound is almost quantitatively converted into hemoglobin when given by intravenous injection. Ramsey reported in *Brit. Med. J.* [No. 4642:1109 (May 13, 1950)] that the injection of saccharated iron oxide is the treatment of choice for patients with microcytic hypochromic anemia who are unable to tolerate iron given orally, or who are unable to absorb it.

Severe toxic reactions, particularly nausea, vomiting, and prostration, are encountered if the drug is given in massive doses. However, if the iron is given in daily doses of 100 mg. and then gradually increased to 200 or 300 mg. per dose the toxic reaction will be eliminated. Antihistamine drugs were ineffective in reducing the incidence of toxic reactions following massive doses. The object of the large doses was an attempt to replace the entire requirements of iron by a single intravenous injection.

keep cough within bounds with

DIATUSSIN

When cough is dry, hacking, unproductive, spasmodic or violent, it does no good, and only harasses the patient, disturbs his rest, delays recovery and lowers morale. Such coughing can be kept within reasonable bounds, safely and effectively, with the aid of DIATUSSIN, the non-narcotic antitussive.

By its dual action, local and central, DIATUSSIN reduces irritation of respiratory tract mucosa, liquefies mucoid secretions and raises the cough center threshold to excessive stimuli. DIATUSSIN thus lessens the frequency of cough, enhances its efficiency and transforms it from the irritating dry type to the easier productive type. It does not suppress cough, as narcotics may do, but keeps it under control, and makes it useful rather than harmful.

Administration: Orally, for children 2 to 5 drops, or 1 to 2 fluidrams of syrup, repeated as indicated; for adults 7 drops, or 1 tablespoonful of syrup.

Supply: DIATUSSIN Syrup—Each fl. dr. (3.7 cc. teaspoonful) contains 2 drops of the extract—Bottles 4 fl. oz., 1 pt. DIATUSSIN—Vial, 6 cc.

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NEWS AND NOTES

Red Cross Blood Collection

General George C. Marshall, president of the American Red Cross, recently accepted a request by (former) Secretary of Defense Johnson that the Red Cross become the official agency for the procurement of blood for the armed forces when such blood and its derivatives are needed.

In his letter of acceptance General Marshall asured Mr. Johnson the Red Cross was prepared at once "to increase the output of its national blood program to provide the armed services with the blood that may be required."

"While we deplore the situation which requires this action," General Marshall said, "it is the sensible thing to do, particularly in view of world conditions."

Mr. Johnson recalled in his letter that the blood procurement task performed by the Red Cross during World War II "was most successful."

"It is my desire in writing you at this time," Mr. Johnson stated, to recommend that a similar relationship between the American National Red Cross and the Department of Defense be established so that in time of need the armed forces may look to the American Red Cross as the official procurement agency for the needs of the armed forces as related to whole blood and blood derivatives."

General Marshall designated Vice Admiral Ross T. McIntire, (M.C.) USN, Retired, of the Red Cross National Blood Program, to work with Dr. Richard L. Meiling, director of Medical Services of the Department of Defense, to coordinate and develop the plan.

At present 34 regional blood centers and 46 mobile units are operating in the Red Cross blood program. They are now collecting approximately 63,200 pints of blood a month for civilian use. A total of 677 Red Cross chapters are participating in the collection and processing centers.

The regional centers are serving more than 1,900 hospitals in 38 states. The centers are so established that they can be swung immediately into high gear in event of a national emergency.

The American Red Cross blood program of World War II was begun at the request of the military February 1, 1941. Between then and the end of the war 13,326,242 pints were collected. Of this amount 12,628,645 pints were processed into dried plasma and serum albumin for use overseas.

In August 1944 whole blood for the first time was flown direct from the United States to forward military hospitals overseas. The first of this blood was used at Tarawa. Whole blood was also flown to the European Theater.

Blood, plasma and other blood derivatives are credited by military surgeons with having been a major factor in the low death rate among American servicemen. More than 97 percent of the

—Continued on page 66a

NEWS AND NOTES

—Continued from page 64a

wounded survived. This is the highest record of survival in all military history.

Since the inauguration of the postwar National Blood Program of the Red Cross in January, 1948, approximately 844,160 pints of whole blood have been processed and distributed to hospitals, physicians and clinics.

Regional blood centers of the Red Cross National Blood Program are now in operation at: Rochester, N. Y.; Wichita, Kansas; Stockton, Calif.; Atlanta, Ga.; Boston, Mass.; Washington, D. C.; Los Angeles, Calif.; Tucson, Ariz.; San Jose, Calif.; Omaha, Neb.; Springfield, Mo.; St. Louis, Mo.; Charlotte, N. C.; Lansing, Mich.; Detroit, Mich.; Yakima, Wash.; Great Falls, Mont.; Columbus, Ohio; St. Paul, Minn.; Nashville, Tenn.; Portland, Ore.; Boise, Idaho; Philadelphia, Pa.; Asheville, N. C.; Louiseville, Ky.; Syracuse, N. Y.; Mobile, Ala.; Johnstown, Pa.; Savannah, Ga.; Norfolk, Va.; Wilkes-Barre, Pa.; Buffalo, N. Y.; Hartford, Conn.; and Madison, Wis.

American Academy of Dermatology and Syphilology

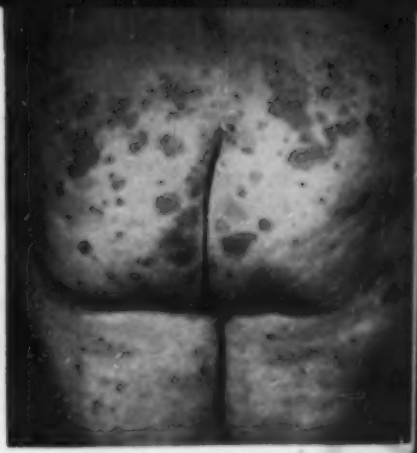
The ninth annual meeting of the American Academy of Dermatology and Syphilology will be held in Chicago from Saturday, December 2nd through Thursday, December 7th, it is announced by Dr. John E. Rauschkolb, secretary-treasurer of the Academy, of Cleveland (P. O. Box 6565), Ohio.

The principal sessions will be held at the Palmer House, with special courses in histopathology and mycology scheduled for Saturday and Sunday, Decemer 2 and 3, at the medical Schools of the University of Illinois and Northwestern Uni-

—Continued on page 70a

RIASOL

ne plus ultra in Psoriasis



Before Use of RIASOL

Clinically tested RIASOL is by far the leading prescription in psoriasis. From coast to coast physicians are relying on RIASOL to clear the ugly patches quickly, often in the amazingly short period of a few weeks.

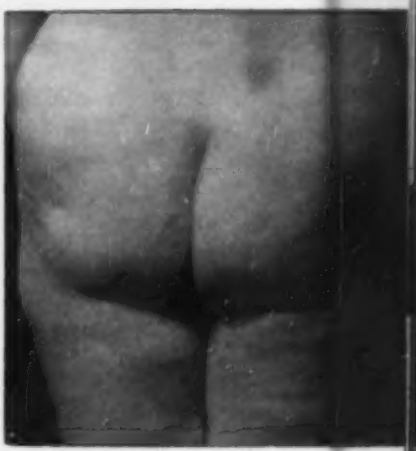
When other methods of therapy have failed, many doctors turn confidently to RIASOL. Its achievement of therapeutic success ranks very high, even in cases which have been neglected for many years.

RIASOL contains 0.45% mercury chemically combined with soaps, 0.5% phenol and 0.75% cresol in a washable, non-staining, odorless vehicle.

Apply daily after a mild soap bath and thorough drying. A thin, invisible, economical film suffices. No bandages necessary. After one week, adjust to patient's progress.

RIASOL is ethically promoted. Supplied in 4 and 8 fld. oz. bottles at pharmacies or direct.

Mail coupon today for your free clinical package. Prove RIASOL in your own practice.



After Use of RIASOL

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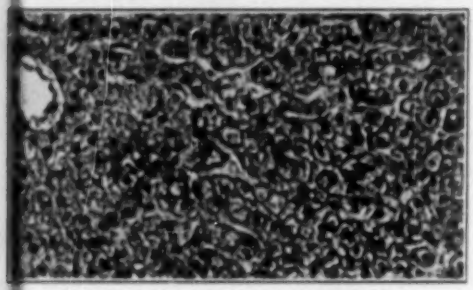
RIASOL for PSORIASIS

PHENOLPHTHALEIN AND THE LIVER

THE discovery[1] that the rhesus monkey *(Macacus rhesus)* is the most suitable test animal for the evaluation of the laxative efficiency of phenolphthalein provided a method of bio-assay which established the wide margin of safety of this laxative.

The innocuousness of phenolphthalein was demonstrated when rhesus monkeys repeatedly received 200 times their individual threshold dose, without liver damage resulting from this very large overdose. The gross and microscopic findings showed no cell destruction, no infiltration, no inflammatory or other discernible pathological changes in the liver.



Photomicrographic appearance of sections of the liver from monkey receiving 200 times its threshold dose of phenolphthalein. No pathologic changes present.

Neither were there any signs of intestinal or kidney irritation, nor of any toxic influence. There was only gradually lessening laxation of two or three days duration, without constipation — nothing more.

The monkeys that were not sacrificed for examination remained symptomless throughout their life span.

That phenolphthalein is harmless to the liver and other organs was demonstrated clinically by several investigators[2, 3, 4, 5]. No report of liver damage from phenolphthalein has appeared in medical literature. Any impression to the contrary may have resulted from confusion of phenolphthalein with its halogenated compounds, such as tetraiodophenolphthalein, which exert an untoward influence on the liver.

Overdoses of 12, 96, and 130 grains of phenolphthalein were tolerated uneventfully[6], proving that it is a safe drug with an exceptionally wide latitude in dosage. Fantus[7] was unable to produce a lethal effect in test animals of the higher and lower order, with any dose it was possible to administer. For this reason, the minimal lethal dose of phenolphthalein remains undetermined.

Phenolphthalein is the active ingredient of Ex-Lax. To assure its effectiveness, it is biologically standardized. Its chocolated base imparts unusual palatability to Ex-Lax, making it particularly suitable when pleasant taste is an important consideration, as during pregnancy and in administration to children.

Ex-Lax gently stimulates the peristaltic action of the colon, without producing an excessive effect or sudden embarrassing urgency. Taken at bedtime, it does not disturb sleep. Ex-Lax is equally suitable for adults and children, in appropriate doses. Its use by many physicians in their practice is a most significant expression of confidence in the therapeutic merits of Ex-Lax as an all-around laxative

A trial quantity of Ex-Lax and literature will be gladly supplied to physicians... Ex-Lax, Inc., Brooklyn 17, New York.

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NEWS AND NOTES

—Continued from page 66a

versity. Special courses in X-Ray and radium therapy, and bacteriology of the skin, will be held Saturday and Sunday at the Palmer House. There will also be special courses in anatomy and embryology of the skin and special problems in dermatohistopathology Sunday at the Palmer House.

Find Smear Test Reliable for Detecting Lung Cancer

In the hands of a careful and experienced expert in the structure and function of cells, the smear test can be a reliable indication of cancer of the lung.

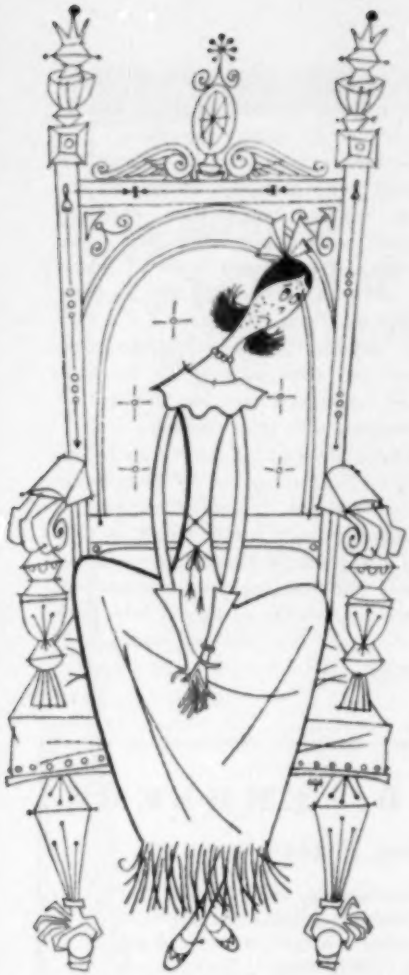
This is the conclusion of a group of San Francisco doctors who spent four years making tests of the sputum of 2,066 patients according to the method developed by Dr. George N. Papanicolaou of Cornell University Medical College, New York.

The doctors—Seymour M. Farber, Allen K. McGrath Jr., Mortimer A. Benioff and Milton Rosenthal of the University of California School of Medicine, San Francisco Hospital and the San Francisco Department of Public Health—report their study in a recent issue of the *Journal of the American Medical Association.*

The positive smear test result appears to be a reliable indication of cancer if the test has been expertly and conservatively read; however, a negative test result is not a reliable indication of freedom from malignant disease, the doctors indicate.

The test is a technique for collecting sputum and bronchial secretions containing cellular debris that has become dislodged from the surface of the malignant growth, smearing the material on glass slides and staining it. Study of the slides under the microscope may reveal malig-

—Continued on page 72a



to help

your acne patient

get back "in the swing"

Your complexion-conscious young acne patient regains her self-confidence when you write 'ACNOMEL'. Because ACNOMEL is:

1 *Immediately effective cosmetically.* ACNOMEL is delicately flesh-tinted. It masks the acne lesions, yet is virtually invisible when applied.

2 *Rapidly effective therapeutically.* ACNOMEL ordinarily brings definite improvement—not in months or weeks, but in a matter of days.

Formula: Resorcinol, 2%; and sulfur, 8%; in a stable, grease-free, flesh-tinted vehicle.

Smith, Kline & French Laboratories, Philadelphia

Acnomel

'Acnomel' T.M. Reg. U.S. Pat. Off.

a significant advance, clinical and cosmetic, in acne therapy

—Continued from page 70a

nant cells or those unusual enough to be regarded as "suspicious" or doubtful indications of cancer.

A group of 241 patients with proved cancer originating in the lungs was used for computing the percentage of diagnostic accuracy of the test. Although the over-all percentage accuracy in this group was 55 per cent, in the 130 patients in whom an adequate series of five sputum specimens was examined the case finding sensitivity was 90 per cent.

Among these 241 patients, 117 underwent surgery. In 26 of these, the smear test was the only preoperative structural proof of cancer.

Positive smear test diagnoses were made on 201 patients, all except two of whom had cancer. The two false positive test results were read during the first year of the study from examination of an insufficient number of sputum specimens.

"We believe it is essential to examine routinely five specimens of sputum, to request sputum examinations whenever bronchial smears are examined and found negative and to request repeated specimens when the cytologic [cell] findings are equivocal," the doctors say.

"A negative cytologic examination (smear test) does not rule out the presence of cancer and must be correlated by the clinician with other findings.

"Almost absolute reliability can be obtained by rigid adherence to carefully determined cytologic criteria of malignancy. If suggestive cells are reported as definitely malignant, a higher percentage of patients with bronchogenic carcinoma will be detected, but the number of false positive diagnoses also will be increased. If suggestive cells are reported as such, but

—Continued on page 74a

—Continued from page 72a

not interpreted as unequivocally malignant, the positive diagnoses can be relied on almost 100 per cent.

"The ultimate value of cytologic technics (including the smear test) in the early diagnosis of primary lung cancer remains to be established by further work."

Postwar Distribution of Doctors More Even Than Prewar

Family doctors in private practice, who provide the bulk of medical care for the nation, were evenly distributed in 1949 in relation to state populations than in 1938.

This is shown by a study recently published as Bulletin 78 of the American Medical Association's Bureau of Medical Economic Research.

"Despite the tremendous population shifts during the 1940's and the high level of national prosperity, which would tend to draw physicians to the heavily populated industrial states, general practitioners have redistributed themselves into a more even pattern than was found before World War II," said Frank G. Dickinson, Ph.D., of Chicago, director of the bureau.

"The figure in our study on physician-population relationships by states that is important to most people is the distribution of family doctors who actually have their offices open for private practice. It is not the distribution of the total number of doctors. Therefore, in our computation we eliminated doctors in the government services and armed forces, on hospital duty on a full-time basis, retired physicians and those in administrative and other such positions which take them out of private practice.

—Continued on page 76a

Quality and Craftsmanship . . .

GELUSIL* *'Warner'*

Once in a long while a remedy is evolved which meets practically all of the medical requisites: effective, safe, and reliable. In the management of peptic ulcer or hyperacidic conditions, GELUSIL* 'Warner' by combining comparatively non-reactive aluminum hydroxide gel with magnesium trisilicate, provides the advantages of both:

Prompt action **Prompt relief**
Prolonged action **Prolonged relief**

without secondary acid rise, chloride depletion, or danger of alkalosis;

and, most important, there is practically no constipation.[1]

HOW AVAILABLE: GELUSIL* 'Warner,' the safe, effective and reliable antacid preparation is purely local and non-systemic in its action.

TABLETS—each containing magnesium trisilicate, 0.5 Gm (7.5 grains) and dried aluminum hydroxide gel, 0.25 Gm (4 grains): boxes of 50 and 100, and bottles of 1000 tablets.

LIQUID—magnesium trisilicate, 0.5 Gm (7.5 grains) and aluminum hydroxide, 0.25 Gm (4 grains) per 4 cc (1 teaspoonful): bottles of 6 and 12 fluidounces.

[1]Seley, S. A.: Medical Management of Pyloric Obstruction Resulting from Peptic Ulcer, *Am. J. Dig. Dis., 13*:238, 1946.

*T. M. Reg. U. S. Pat. Off.

WILLIAM R. WARNER
Division of Warner-Hudnut, Inc.
New York • Los Angeles • St. Louis

NEWS AND NOTES

—Continued from page 74a

"A separate study was made to show the distribution of full-time specialists—those who do no general practice—in private practice because these physicians draw their patients from wider areas and, on the whole, are located in the cities.

"However, we found that full-time specialists, like family doctors, were more evenly distributed in relation to state populations in 1949 than in 1938.

"These conclusions are based upon statistical measures of relative variations in the state physician-population ratios."

Link Lung Cancer to Prolonged Tobacco Smoking

A significant relationship between prolonged tobacco smoking and development of cancer of the lung is shown by two reports published in a recent issue of the *Journal of the American Medical Association.*

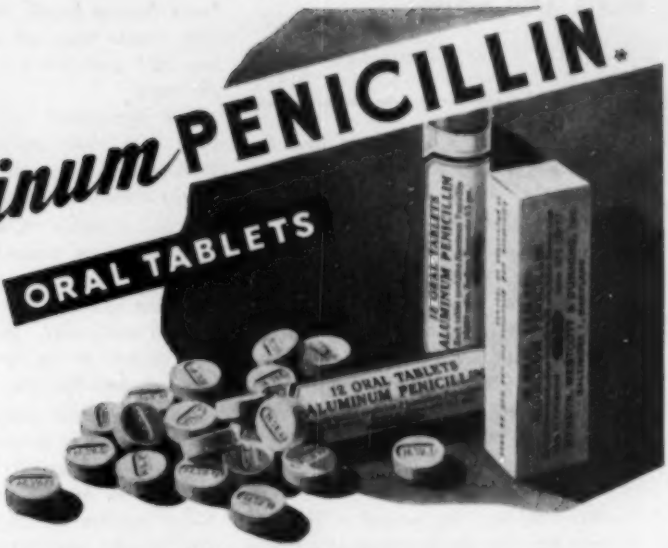
Excessive and prolonged use of tobacco, especially cigarets, seems to be an important factor in causing cancer which originates in the lungs, Ernest L. Wynder, B.A., and Dr. Evarts A. Graham of Washington University School of Medicine and Barnes Hospital, St. Louis, conclude.

Among 605 men with lung cancer, 96.5 per cent were moderately heavy to chain smokers for many years, compared with 73.7 per cent among the 780 men in the general hospital population without cancer, the St. Louis doctors point out. Among the cancer group, 51.2 per cent were excessive or chain smokers compared to 19.1 per cent in the general hospital group.

"In general, it appears that the less a person smokes the less are the chances of

—Continued on page 78a

Aluminum PENICILLIN.*



Greater effectiveness

Oral therapy with Aluminum Penicillin has proved to be effective in fulminating infections such as pneumonia[1] and in other infections due to streptococci, staphylococci and gonococci.[2] It rarely causes gastric disturbance or allergic reactions. The patient's bodily and mental comfort is improved because the necessity for frequent injections is eliminated.

The unique advantages of Aluminum Penicillin are that it is not soluble in solutions of acidity corresponding to that of gastric secretion, but is gradually converted into a readily absorbed form in the intestinal tract. These factors provide for maximum utilization of the dosage administered, higher and more prolonged blood levels.[3]

Sodium benzoate is added because it inhibits the destructive action of intestinal enzymes.[4]

Oral Tablets

Each tablet contains: Aluminum Penicillin, 50,000 units; sodium benzoate, 0.3 gram. Supplied in vials of 12 tablets.

[1]Terry, L. L. and Friedman, M. The Military Surgeon, Vol. 103, No. 5, November, 1948.
[2]Friedman, M. and Terry, L. L. Southern Medical Journal, Vol. 42, No. 6, June, 1949.
[3]Bohls, S. W. and Cook, E. B. M. Texas State Journal of Medicine, Vol. 41, November, 1945, p. 342.
[4]Reid, R. D., Felton, L. C. and Pitroff, M. A. Pro. Soc. for Exp. Biol. and Med., Vol. 63, 1946, p. 438.

* Patent applied for.

HYNSON, WESTCOTT & DUNNING, INC.
Baltimore, Maryland

NEWS AND NOTES

—Continued from page 76a

cancer of the lung developing and the more heavily a person smokes the greater are his chances of becoming affected with this disease," they say.

Smokers were classified on the basis of number of cigarets smoked per day for 20 years or more. Pipe and cigar smokers were included by counting one cigar as five cigarets and one pipeful as two and a half cigarets. Light smokers were classified as smoking one to nine cigarets, moderately heavy smokers 10 to 15, heavy smokers from 16 to 20, excessive smokers 21 to 34 and chain smokers 35 or more.

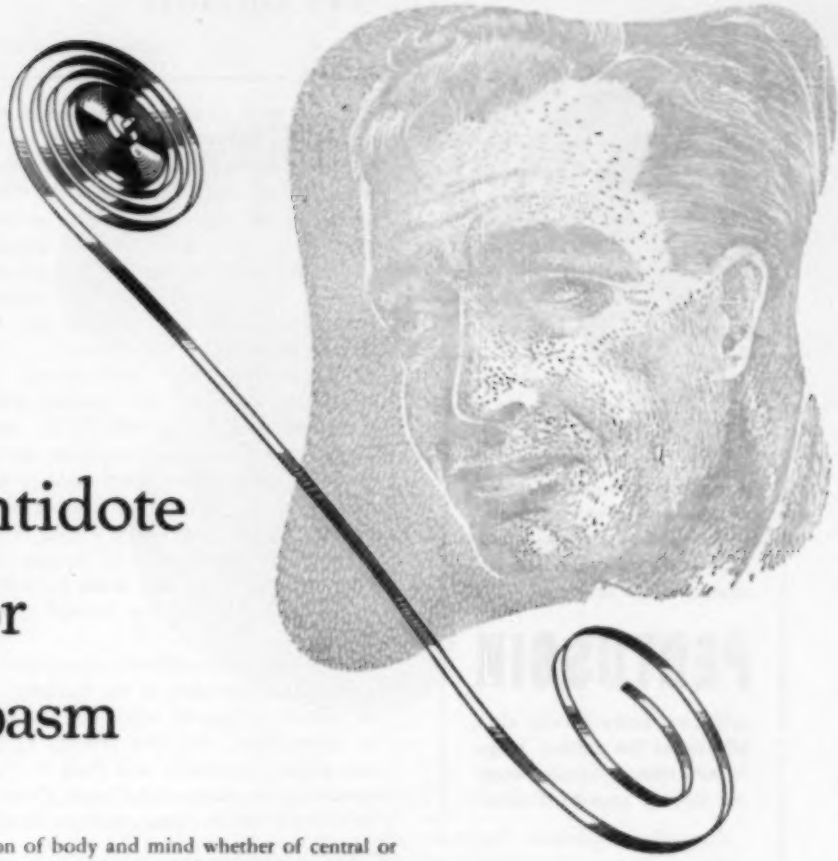
There can be a lag period of 10 years or more between the cessation of smoking tobacco and the occurrence of clinical symptoms of cancer, however, the St. Louis doctors found. Among the patients with cancer who had a history of smoking, 96.1 per cent had smoked for over 20 years.

The occurrence of carcinoma of the lung in a male nonsmoker or minimal smoker is a rare phenomenon (2.0 per cent), according to the study.

Tobacco seems to play a similar but somewhat less evident role in causing cancer in women, the doctors found. The incidence of lung cancer is less in women than in men today. This is believed to be due in part to the fact that few women have smoked for over 20 years.

There is rather general agreement that that incidence of bronchiogenic carcinoma has increased greatly in the last half century, the doctors point out. The enormous increase in the sale of cigarets in this country approximately parallels this increase of bronchiogenic carcinoma.

—Continued on page 80a



antidote for spasm

Tension of body and mind whether of central or autonomic origin finds a safe, pleasant antidote in Barbidonna. This logical combination of the natural belladonna alkaloids and phenobarbital affords the smooth spasmolysis . . . the balanced sedation . . . so essential for rapid control of smooth muscle spasm in the gastro-intestinal, cardiovascular, respiratory or urogenital tracts and psycho-tension of the central nervous system. Write today for further information and a professional sample.

Formula: Each tablet or fluidram (4 cc.) of elixir contains:

Phenobarbital	16.0 mg. (¼ gr.)
Belladonna Alkaloids	0.134 mg.

(approximately equivalent to ½ gr. belladonna leaves or 7 min. Tr. belladonna)

Tablets: in bottles of 100, 500 and 1000

Elixir: in bottles of 1 pint and 1 gallon

BARBIDONNA

VANPELT & BROWN, INC. *Pharmaceutical Chemists* **RICHMOND, VIRGINIA**

NEWS AND NOTES

—Continued from page 78a

Among male patients with cancer of the lungs, 94.1 per cent were found to be cigaret smokers, 4.0 per cent pipe smokers and 3.5 per cent cigar smokers. This prevalence of cigaret smoking is greater than among the general hospital population of the same age group. The greater practice of inhalation among cigaret smokers is believed to explain the increased incidence of the disease.

Data obtained from 1,650 patients admitted routinely to the Roswell Park Memorial Institute, Buffalo, N. Y., indicate that in a hospital population cancer of the lung occurs more than twice as frequently among those who have smoked cigarets for 25 years than among other smokers or nonsmokers of comparable age, according to another study published in the same issue of the *Journal of the A.M.A.*

"Pipe smokers apparently experience an almost equal increase in the incidence of lip cancer, compared with other smokers or nonsmokers," say Drs. Morton L. Levin, Hyman Goldstein and Paul R. Gerhardt of the Bureau of Cancer Control, New York State Department of Health, Albany.

"The data suggest, although they do not establish, a causal relation between cigaret and pipe smoking and cancer of the lung and lip. Cancer is now generally considered a disease attributable to multiple causative factors. Among these are 'irritants.'

"An irritant which is noncarcinogenic alone may nevertheless increase the percentage of tumors produced when its action is combined with that of a carcinogen. Thus, some experimental basis exists for explaining the apparent effect of cigaret and pipe smoking, although the true nature of the association with lung and lip cancer remains to be determined."

VISCOSITY

A vaginal jelly or cream with too heavy a viscosity is apt to remain in the posterior fornix and latently come in contact with the sperm. A lubricant with a very light viscosity tends to reduce required chemical barrier film. Koromex Jelly and Cream have the ideal viscosity determined by many years of laboratory tests and patient approval.

ACTIVE INGREDIENTS: BORIC ACID 3.0% OXYQUINOLIN BENZOATE 0.02% AND PHENYLMERCURIC ACETATE 0.02% IN SUITABLE JELLY OR CREAM BASES

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Assistants	Books
Physicians	Equipment
Locations	Practices
Equipment	FOR RENT
Books	MISCELLANEOUS

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WANTED (Physicians, Assistants, etc.)

COUNTRY practice for general practitioner open. Chesapeake Bay area. Box 10A71, Medical Times.

DETROIT. General practitioner wants nurse or young lady experienced in x-ray, BMR & blood counts. Reply in longhand, giving references, etc. Send recent snapshot. Box 10A66, Medical Times.

EENT man wanted for old clinic group. Illinois. Box 10A65, Medical Times.

HOSPITAL administrator wanted for 30 bed hospital. Write Mr. E. A. Cameron, Union Springs, Alabama.

OPTOMETRIST desired—on same floor with M.D. and Chiropodist in busy location. Good opportunity for right person. Box 11A73, Medical Times.

INTERNIST is interested in forming a group on the south side of Chicago. Also looking for an assistant. Completely equipped suite with technician. Box 11A75, Medical Times.

WANTED—Pediatrician to join established clinic group. S.E. Florida. Good opportunity. Box 11A75, Medical Times.

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WANTED—General practice and surgery assistant. Calif. Box 10A70, Medical Times.

WANTED. General practitioner, licensed in Illinois to associate with established physician; own modern 17 bed hospital, small town southern Illinois. Salary $6,000 plus modern house. Box 10A67, Medical Times.

LOCUM TENENS—Large general practice in western Pa. City of 55,000. Open Oct. 1 to June 1, 1951. Ideal financial set-up for 1951 resident acceptee. Box 10A69, Medical Times.

THERE are many towns in South Dakota crying for a doctor. Collections are good and country doctors are Personages. If you want open arms, look into some S. Dakota location. Box 10A68, Medical Times.

WANTED—Young physician, class A school, interested in EENT but able to help with general practice. Forming small group in Colorado town of 15,000. Box 10A64, Medical Times.

—Continued on page 84a

3 Useful Cardiac Drugs

1 Thesodate — Brewer IN ANGINA PECTORIS

(Theobromine Sodium Acetate 7½ gr. enteric coated)

Thesodate has been proven effective in increasing the capacity for work in individuals suffering from coronary artery disease. One Thesodate tablet four times a day (after meals and at bedtime) helps to maintain improved heart action and increased coronary artery circulation.

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(Potassium Iodide one gram or half gram enteric coated)

Enkide is useful as an adjuvant in tertiary syphilis and wherever potassium iodide therapy is indicated. Enkide insures accuracy of dosage, absence of gastric irritation and convenience of administration. Patients are more apt to follow prescription directions because of these advantages.

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Amchlor cuts in half the number of tablets each patient takes when large amounts of ammonium chloride are prescribed. This convenience to the patient helps to insure full and complete use of the entire amount prescribed. Amchlor is useful in cardiac edema, hypertension, dysmenorrhea, Meniere's Syndrome, etc.

Samples and Literature Available Upon Request.

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CLASSIFIED ADVERTISEMENTS

—Continued from page 82a

WANTED (Equipment, Homes, etc.)

WANTED—Good used Sanborn basal metabolism; Liebel Flarsheim S.W. diathermy with hinged drum and good used direct writing cardiograph. Box 10B13, Medical Times.

WANTED—Medical instruments of diagnostic or therapeutic value. Either antiques or new ideas. Also interested in any suggestions. Making a collection. Box 7B7, Medical Times.

WANTED: a second-hand microscope. Will pay a reasonable price. Box 8B9, Medical Times.

WANT TO BUY used instruments or complete office equipment. Desire inventory and condition of material. Prefer blanket price. La. Box 9B11, Medical Times.

WISH TO BUY: Suction & pressure unit in cabinet and May ophthalmoscope in good condition. Give details on make, year and price. Box 8B10, Medical Times.

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CERTIFIED in medicine & allergy; married—2 children. Age 42; good health. Experience as medical director of insurance company. Could assist in part-time work with small insurance co. Texas. Box 7C10, Medical Times.

G.P. doing some surgery seeks change in Calif. or New York to improve experience in surgery. Box 10C13, Medical Times.

MY SON, B.A., M.S., at present Parasitologist for Dept. of Health would like position as Chief Parasitologist or instructor in same subject. Box 10C14, Medical Times.

PRECEPTORSHIP or assistantship wanted with either a plastic surgeon or general surgeon or other surgical specialty by 33 year old married G.P. 8 years G.P. Practice successful—but wants to specialize. Box 7C11, Medical Times.

EEG technician, experienced, seeks employment either in hospital or with neurologist. Globe trained. A-1 recommendations. Box 11C16, Medical Times.

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MODERN RANCH TYPE house, fieldstone brick construction, two years old. Corner of important street, growing community, within commuting zone of New York City. Five rooms, two fire places, breezeway, garage on first floor. Partially finished second floor. Full cellar, oil heat, storm windows, screens, venetian blinds. Beautifully landscaped grounds, 100x65. Price: $21,000 unfurnished; $23,000 furnished. Box 11E12, Medical Times.

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WONDERFUL country practice and property for sale. Indiana. Want to retire after 40 years practice. Box 11F26, Medical Times.

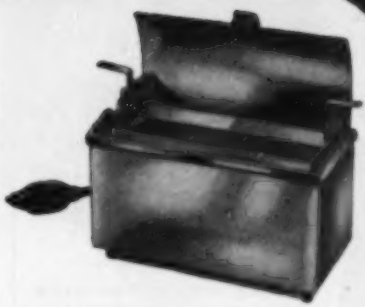
FOR SALE—lucrative general practice and home in Chicago suburb—reasonable. Box 11F24, Medical Times.

—Continued on page 86a

Meet the
8-INCH STERILIZER TWINS!

I am Model 8-O . . .

a mighty handy and efficient unit that both sterilizes and lubricates with NOT OIL. You will find me unexcelled for dental handpieces, contra-angles, forceps, burrs, chisels, mirrors and the many allied instruments that are subject to rust or corrosive damage if repeatedly exposed to boiling water.



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a compact and dependable BOILING WATER sterilizer especially suitable for syringes, needles and the many steel surgical instruments the efficiency of which are not impaired by repeated exposure in the medium of boiling water.

Model 8 is ideal for the private home
where sterilization of hypodermic syringes and needles employed in the treatment of diabetes and other conditions is required.

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- Chamber dimensions 2¼ x 3¼ x 8 inches.
- Fabricated of cast bronze, stainless steel and Monel metal, with Fenwal precision thermostatic control unit for accurate temperature maintenance.
- Constructed to permit cover to open full 90° and automatic lifting of instrument tray which may be easily and firmly secured for draining.

Ask your dealer or write us for further information

AMERICAN STERILIZER COMPANY

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CLASSIFIED ADVERTISEMENTS

—Continued from page 84a

FOR SALE (Equipment)

THE DECEASED Dr. J. R. Bate's office equipment is for sale. The latest and most modern equipment, consisting of: Diathermy machines, Basal Metabolism, EKG machine, X-Ray machine, assorted instruments, etc. Contact: Mr. Alexander B. Bate (Brother), P.O. Box 1196, Tallahassee, Florida.

FOR SALE—EKG, Basal, X-Ray and accessories; Burdick Rhythmic Constrictor. Box 10G51, Medical Times.

ONE MOBILE combination arm, hand and foot and leg paraffin bath model PB-109; including 110 lbs.—special 126° F. melting point paraffin and 6 qts. paraffin oil. Brand new, never used, complete —$350.00. Made by Ille Electric Corp. Box 11G58, Medical Times.

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One Disease You No Longer Worry About

Just two decades ago, rickets was a major medical problem affecting almost half of our infants and children to a greater or lesser degree.

Today it is a rarity. Gross symptoms of rickets are as hard to find as the traditional "needle in a haystack."

Physicians had long used vitamin D in various forms to prevent and to treat rickets successfully in their practices. The chief factor which brought about the sweeping change in the incidence of rickets in recent years was the addition of vitamin D to milk, especially to evaporated milk, which thus carried automatic protection against rickets to infants in all walks of life—on a *communal scale!*

Of special interest to you, doctor, is the *amount* and the *kind* of vitamin D in Pet Evaporated Milk—400 U.S.P. units of pure crystalline vitamin D_3—which is sufficient for rickets prevention and best growth but *does not interfere with any additional vitamin D you may wish to use.* With this complete freedom to prescribe, you have the comforting assurance that when Pet Milk is fed in customary amounts, babies get a basic vitamin D protection—even when mothers forget.

Thus you no longer worry about rickets!—either in babies fortunate enough to have your care—or in the thousands who must depend upon the welfare clinic. For all their sakes—continue to use vitamin D milk—continue to use Pet Milk—the first evaporated milk—a standard of highest quality for more than 65 years.

Favored Form of Milk for Infant Formula

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MEDICAL TIMES

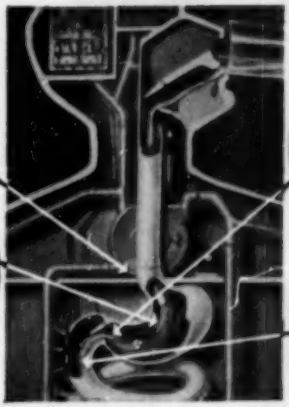
Advertisers Index

NOVEMBER, 1950

Give faster pain relief with BUFFERIN

ACTS TWICE AS FAST AS ASPIRIN

WITHOUT GASTRIC DISTRESS!



1. BUFFERIN enters the stomach here.

2. BUFFERIN exerts its antacid effect, lessening the possibility of gastric distress.

3. BUFFERIN helps dilate the pyloric valve, promptly leaves the stomach.

4. BUFFERIN's analgesic component is absorbed into the blood *twice as fast as aspirin*, relieves pain.

When you prescribe BUFFERIN to your patients you assure *faster relief of pain*. Clinical studies[1] show that within ten minutes after BUFFERIN is ingested, blood salicylate levels are as great as those attained by aspirin in twice this time. That is why BUFFERIN *acts twice as fast as aspirin.*

BUFFERIN has *greater gastric tolerance.* BUFFERIN's antacid ingredients provide protection against the gastric distress so often seen with aspirin.[1] BUFFERIN, therefore, is especially suited for use when prolonged use of salicylates is indicated.

1. Effect of Buffering Agents on Absorption of Acetylsalicylic Acid J. Am. Pharm. A., Sc. Ed. 39:21, Jan. 1950.

In vials of 12 and 36 and bottles of 100. Scored for divided dosage. Each BUFFERIN tablet contains 5 grains of acetylsalicylic acid with optimal proportions of magnesium carbonate and aluminum glycinate.

BUFFERIN
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going deep

The "hyperkinemic" activity of Baume Bengué goes beneficially deep. It enhances blood flow *through the tissue area* in arthritis, myositis, muscle sprains, bursitis and arthralgia. As Lange and Weiner[1] determined by the use of thermo-needles, hyperkinemic effect may extend to a depth of 2.5 cm.

Baume Bengué also promotes systemic salicylate action. It provides the high concentration of 19.7% methyl salicylate (as well as 14.4% menthol) in a specially prepared lanolin base to foster percutaneous absorption.

Baume Bengué

ANALGESIQUE

1. Lange, K., and Weiner, D.: J. Invest. Dermat. 12:263 (May) 1949.

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Cytora, in the recommended daily dose of 6 tablets, provides desiccated ferrous sulfate, 600 mg.; folic acid, 4 mg.; liver concentrate, 900 mg.; vitamin C, 150 mg.; vitamin B_1, 6 mg.; vitamin B_2, 6 mg.; vitamin B_{12}, 30 mcg.; nicotinamide, 30 mg.; calcium pantothenate, 6 mg.; and other factors naturally present in liver concentrate. Cytora is available in bottles of 100, 250, and 1000 tablets.

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The troublesome factors of

Hypochromic Anemia

with OVOFERRIN

OVOFERRIN "irons out" the patient's resistance to iron therapy because it is palatable—acceptable to old and young.

OVOFERRIN "irons out" hemoglobin deficiencies more efficiently because it is well tolerated, with virtually no gastric disturbance to bar assimilation.

Those are the sound reasons why **OVOFERRIN** is known as "the build-up without a let-down"

℞ **MAINTENANCE DOSAGE**

FOR ADULTS AND CHILDREN: One teaspoonful 2 or 3 times a day in water or milk.

℞ **THERAPEUTIC DOSAGE**

ADULTS: One tablespoonful 3 or 4 times daily in water or milk. CHILDREN: One to 2 teaspoonfuls 4 times daily in water or milk.

Professional sample on request

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